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# SHARP 21HS-50C SERVICE MANUAL

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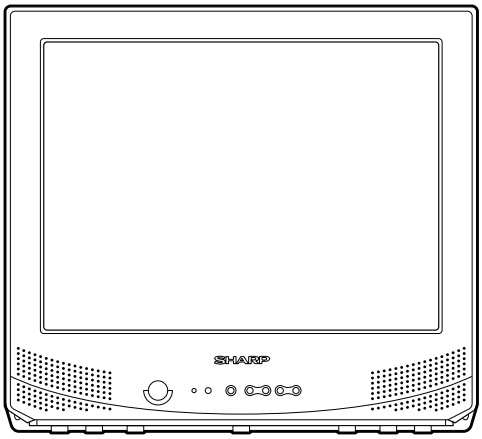
SHARP®

# SERVICE MANUAL

SE0021HS50C00
Issued: 7th June 2002

## GA-1E CHASSIS



PAL D/K,B/G SYSTEM COLOUR TELEVISION

# MODELS 21HS-50C

In the interests of user safety (required by safety regulations in some countries) the set should restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.

## Service Manual update log sheet

| Technical Report No.<br>Technical Bulletin No. | Cause / Solution | Part No. | Page No. | Application<br>Data /Serial No. |
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Use this page to keep any special servicing information as Technical Report (Bulletin), Technical Information, etc.
If only part number changes are required, just change part number directly the part number in the Parts Listing Section.
If you need more information, please refer to the Technical Report (Bulletin).

# ELECTRICAL SPECIFICATIONS

•Power Input .....220V-240 Volts AC 50Hz

•Power Consumption

Normal Operation (Method IEC60107)....43W
Stand-by Operation.....3W

•Audio Power Output Rating .....4W x 2(MPO)

Speaker.....16Ω 4W, 9 x 5 cm,2pcs

Convergence .....Self Converging System
Focus .....Bi-Potential Electrostatic
Sweep Deflection ... .....Magnetic

•Picture Intermediate Frecuency
B/G ..... 38.9MHz
D/K ..... 38.9MHz

•Sound Carrier Trap
B/G ..... 33.4MHz
D/K ..... 32.4MHz

•Adjacent Sound Carrier Trap
B/G ..... 40.4MHz
D/K ..... 40.4MHz

•Adjacent Picture Carrier Trap
B/G ..... 31.9MHz
D/K ..... 30.9MHz

•Aerial Input Impedance
VHF/UHF .....75 ohm Unbalanced

•Tuning Ranges .....48.25MHz thru 855.25 MHz
VHF ....CH02-CH12, R01-R12
S1-S41 (HYPERBAND)
UHF .....CH21 - CH69

•White Level

Set the brightness control, with no signal connected, so that the CRT cathode current is 600μA. The maximum correction applied to each cathode current to achieve a screen temperature of 7250 degrees K-11 MPCD should not exceed 15% of its original value.

| X | Y | Screen temperature |
|---|---|---|
| 0.304 ± 0.015 | 0.306 ± 0.015 | 7250º K-11 MPCD |

Specifications are subject to change without prior notice.

**MODEL DESTINATION (Operation Manual languages)**

**21HS50C:** English, Polish, Russian, Czech, Slovak, Hungarian, Romanian.

**WARNING**

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

# IMPORTANT SERVICING NOTES

Only qualified service personnel are allowed to carry out maintenance and repair of this receiver.

## Servicing of high voltage system and CRT

It is important that the static charge is removed from the high voltage system when carrying out work on the receiver. This can be achieved by connecting a 10K resistor (with a suitably insulated lead) from the CRT cavity connector to the CRT ground tag. This must be carried out with the AC supply disconnected from the receiver. Note the following:

- The CRT in this receiver employs Integral Implosion Protection.
- If the CRT has to be changed it MUST be replaced with the correct type for continued safe working
- DO NOT lift the CRT by its neck.
- When handing the CRT, ensure that shatterproof goggles are worn.
- Ensure that the CRT is discharge before handling.

## X-Ray

This receiver is designed to keep any x-ray emission to an absolute minimum. Some fault conditions and servicing procedures may produce potentially hazardous x-ray radiation levels. This is a problem when in close proximity to the receiver for long periods of time. To reduce any risks associated with this, please observe the following precautions:

1. When undertaking any servicing on this chassis, DO NOT increase the EHT to more than 30.5 KV, (at a instantaneous beam current of 1300μA).
2. Ensure that during normal operation the EHT does not exceed 25.0 KV±1.5KV (at a beam current of 1100μA). This level has been preset in the factory. Always check that this level has not been exceeded after carrying out any repair on the receiver.
3. DO NOT replace the CRT with any other type than that specified in the parts listing as this may cause excessive x-ray radiation.

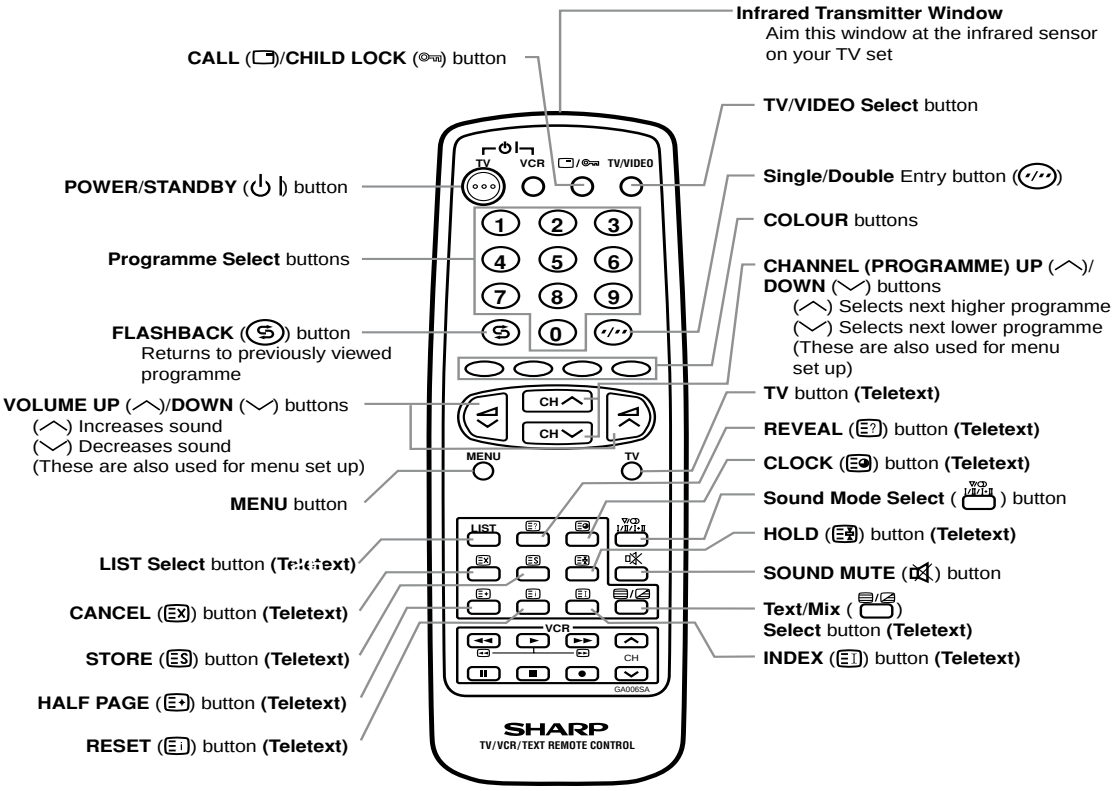
## Before returning the receiver to the customer

In addition to the above checks, the following should also be carried out before returning the receiver to the customer.

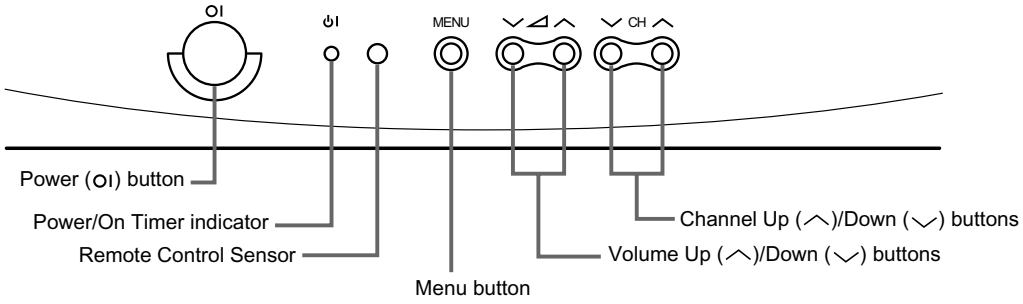
1. Inspect all the leads to ensure that they are dressed correctly and that they are not obstructed or pinched by any other parts.
2. Ensure that all protective devices are in good condition. These will include nonmetallic control knobs, insulating fish papers, cabinets backs, compartment covers or shields, mechanical insulators, etc.

# CONTROLS & TERMINALS

## Remote Control



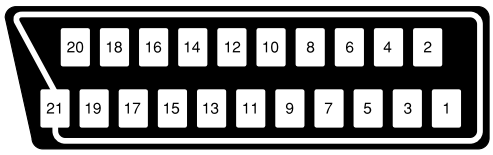

## TV Front




## Euro-SCART 21-Pin Terminal

For greater A/V enjoyment, various audio and video devices may be connected via the Euro-SCART 21-Pin Terminal.

**21-Pin Euro-SCART**




1. Audio right output
2. Audio right input
3. Audio left output
4. Common earth for audio
5. Earth for blue
6. Audio left input
7. Blue input
8. Audio-video control
9. Earth for green
10. Not used
11. Green input
12. Not used
13. Earth for red
14. Not used
15. Red input
16. Red/Green/Blue control
17. Earth for video
18. Earth for video
19. Video output
20. Video input
21. Plug shield

***NOTE***

Audio: Stereo Input/Output.

# SERVICE ADJUSTMENTS

## • Service Mode function

All required adjustments for servicing this TV set, may be done in “service mode”, excepting G2 and FOCUS.

**How to access the Service Mode**

1. Turn the receiver on and ensure that it is tuned into a test pattern.
2. Turn the receiver off using the mains switch.
3. Press the volume down and channel up buttons together. See Fig.1.
4. Continue pressing the volume down and channel up buttons while turning the mains on using the mains switch. See Fig.1.

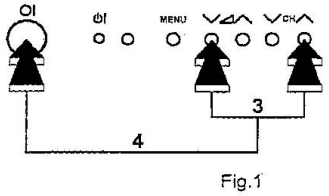


Fig.1

5. Keep pressing the volume down and channel up buttons until the picture appears.
6. When <<SHARPX X VXX.XX>> appears on the screen, release the two buttons.
7. The receiver is now in the service mode.

To move between the various service mode functions, use the channel up and down buttons.

Use the volume buttons to change the data to the desired value.

The data will be stored automatically when exiting the service mode. To exit the service mode press the stand-by button on the remote control or turn the receiver off with the mains switch.

**Fig. 2**

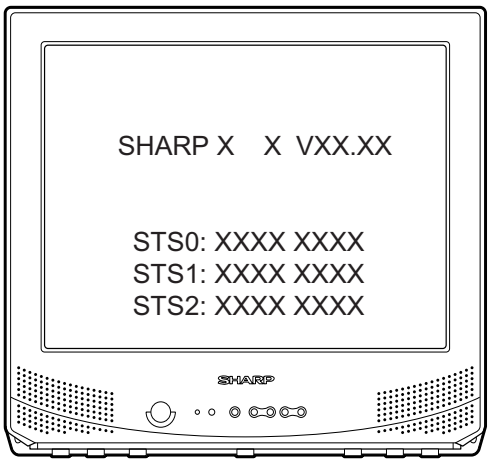
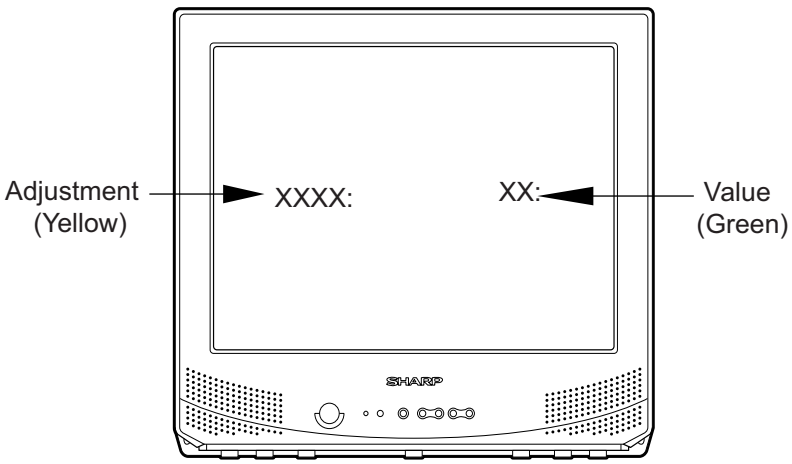



**Fig. 3**



## • Service adjustment and data list

The table below shows the various service mode positions, range of values and default value. The columns are headed as below.

Heading: Descriptions:

OSD This is what will appear on the screen at this position

Function This is the description of the mode's function

Range This is the range of values that can be entered while in this mode

Initial This is the initial value, i.e. just after changing the NVM

Default This is the recommended default value for this mode

FIX/ADJ If this is ADJ, then it may be necessary to adjust this value away from the default

| No. | OSD | Function | Range | Initial | Default | FIX/ADJ |
|---|---|---|---|---|---|---|
| 1 | AGC | AGC Take Over Point | 0...63 | 34 | 34 | ADJ |
| 2 | V-LIN | Vertical Slope [VS] | 0...63 | 33 | 33 | ADJ |
| 3 | V-AMP | Vertical Amplitude [VA] | 0...63 | 18 | 18 | ADJ |
| 4 | V-CENT | Vertical Shift [VSH] | 0...63 | 17 | 17 | ADJ |
| 5 | H-CENT | Horizontal shift [HS] | 0...63 | 34 | 34 | ADJ |
| 6 | H-CENT60 | offset to H-CENT for 60 Hz | 0...31 data(-16..+15) | 20 | 20 | FIX |
| 7 | EW / / | Horizontal Parallelogram [HP] | 0...63 | 32 | 32 | FIX |
| 8 | HB | Horizontal Bow | 0...63 | 32 | 32 | FIX |
| 9 | S-COR | S-Correction [SC] | 0...63 | 22 | 22 | FIX |
| 10 | DRI-RS | White point Red Standard white temp. | 0...63 | 42 | 42 | ADJ |
| 11 | DRI-GS | White point Green Standard white temp. | 0...63 | 42 | 42 | ADJ |
| 12 | DRI-BS | White point Blue Standard white temp | 0...63 | 42 | 42 | ADJ |
| 13 | DRI-RW | White point Red Warm white temp. | 0...32 | 16 | 16 | FIX |
| 14 | DRI-GW | White point Green Warm white temp. | 0...32 | 9 | 9 | FIX |
| 15 | DRI-BW | White point Blue Warm white temp. | 0...32 | 9 | 9 | FIX |
| 16 | DRI-RC | White point Red Cold white temp. | 0...32 | 9 | 9 | FIX |
| 17 | DRI-GC | White point Green Cold white temp. | 0...32 | 9 | 9 | FIX |
| 18 | DRI-BC | White point Blue Cold white temp. | 0...32 | 16 | 16 | FIX |
| 19 | SUB-VOL | Max Volume | 0...63 | 60 | 60 | FIX |
| 20 | SUB-CON | Sub Contrast | 0...63 | 63 | 63 | FIX |
| 21 | SUB-COL | Sub Colour | 0...63 | 25 | 25 | FIX |
| 22 | SUB-BRI | Sub Brightness | 0...63 | 34 | 34 | FIX |
| 23 | TINT | Sub Tint | 0...63 | 32 | 32 | FIX |
| 24 | SUB-SHP | Sub Sharpness | 0...63 | 11 | 11 | FIX |

| No. | OSD | Function | Range | Initial | Default | FIX/ADJ |
|---|---|---|---|---|---|---|
| 25 | HTL-VOL | Max Hotel Volume | 0...63 | 30 | 30 | FIX |
| 26 | HTL-PRG | Hotel Program number | 0...99 or > 99 for none | 255 | 255 | FIX |
| 27 | RGB | OSD RGB Reference | 0...15 | 0 | 0 | FIX |
| 28 | SEARCH-SYS | Sound system for auto turning | 0(L-BG),1(BG),2(I),3(DK) | 1 | 3 | FIX |
| 29 | CUT-R | Black Level offset R [BLR] | 0...63 | 0 | 0 | FIX |
| 30 | CUT-G | Black Level offset G [BLG] | 0...63 | 10 | 10 | FIX |
| 31 | CDL | Cathode Drive Level [CL] | 0...15 | 5 | 5 | FIX |
| 32 | DL-PT | Y-Delay time for PAL (TV) [YD] | 0...15 | 4 | 4 | FIX |
| 33 | DL-ST | Y-Delay time for SECAM (TV) [YD] | 0...15 | 8 | 8 | FIX |
| 34 | DL-4T | Y-Delay time for N443 (TV) [YD] | 0...15 | 8 | 8 | FIX |
| 35 | COL-OP | COLOUR OFFSET (PAL) | 0...15 | 8 | 8 | FIX |
| 36 | COL-OS | COLOUR OFFSET (SECAM) | 0...15 | 8 | 8 | FIX |
| 37 | COL-O4 | COLOUR OFFSET (NTSC443) | 0...15 | 4 | 4 | FIX |
| 38 | SHP-OP | SHARPNESS OFFSET(PAL) | 0...15 | 8 | 8 | FIX |
| 39 | SHP-OS | SHARPNESS OFFSET(SECAM) | 0...15 | 4 | 4 | FIX |
| 40 | SHP-O4 | SHARPNESS OFFSET(NTSC443) | 0...15 | 8 | 8 | FIX |
| 41 | SC-VOL | SCART volume | 0..255 | 109 | 109 | FIX |
| 42 | PRE-SC | Prescaler SCART input | 0..127 | 25 | 25 | FIX |
| 43 | PRE-FM | Prescaler FM/AM | 0..127 | 72 | 72 | FIX |
| 44 | PRE-NICAM | Prescaler SCART input | 0..127 | 90 | 90 | FIX |
| 45 | AVC-DKY | AVC Decay | 1...4 data(1.2.4.8.) | 1 | 1 | FIX |
| 46 | PRE-M | Prescaler SCART input for LL'mono | 0...127 | 3 | 0 | FIX |
| 47 | AC-OFF-TIM | Time to set the AC-OFF<br>timer is in steps of 10 minutes | 0..15 | 0 | 0 | FIX |
| 48 | DISP | Language or symbols | 0(symbols),<br>1(English),<br>2(French) | 0 | 0 | FIX |
| 49 | TXT-EUR | Teletext pan-European language | 0 (teletext pan-european language)<br>1 (second language;cyrillic)<br>2(third language;Greek) | 0 | 1 | FIX |
| 50 | BKS | Black Stretch | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 51 | AVC | Automatic Volume Control(AVL) | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 52 | FFI | Fast Filter IF-PLL | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 53 | ACL | Auto Colour Limit | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 54 | S-L | Sound system L | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 55 | S-DK | Sound system DK | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 56 | S-I | Sound system I | 0 (disable) or 1 (enable) | 1 | 0 | FIX |
| 57 | S-BG | Sound system BG | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 58 | BLUE-BACK | Video mute at Ident loss | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 59 | VMC | Video Mute at program/source Change | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 60 | HTL | Hotel mode | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 61 | BTSC | Reduced FM demodulator Gain (for BTSC sig) | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 62 | AV | Number of external AV sources | 0 for 1 AV or 1 for 2 AV | 0 | 0 | FIX |
| 63 | FMWS | FM Window Selection | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 64 | SM0 | Sound Mute bit 0 | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 65 | SM1 | Sound Mute bit 1 | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 66 | AGC0 | IF AGC speed bit0 | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 67 | AGC1 | IF AGC speed bit1 | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 68 | FOA-FE | Phi 1 time constant for FE(RF) | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 69 | FOB-FE | Phi 2 time constant for FE(RF) | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 70 | FOA-AV | Phi 1 time constant for AV | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 71 | FOB-AV | Phi 2 time constant for AV | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 72 | TXT | Teletext | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 73 | TXT-WE | Teletext Western or Eastern characters | 0 (Western) or 1 (Eastern) | 0 | 1 | FIX |
| 74 | FSL | Forced V-SYNC slicing level | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 75 | HP2 | Sync of OSD | 0 for Ph1 or 1 for Ph2 | 0 | 0 | FIX |
| 76 | CP | Charge pump | 0 (fast tuning) or<br>1 (moderate speed tuning) | 0 | 0 | FIX |
| 77 | NICAM | NICAM decoding enabled | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 78 | IGR | IGR decoding enabled | 0 (disable) or 1 (enable) | 1 | 1 | FIX |
| 79 | AUTO | Start auto tuning at POWER-ON | 0 (disable) or 1 (enable) | 0 | 0 | FIX |
| 80 | TXT-TGL | Function of TXT key | 0 or 1 | 0 | 0 | FIX |
| 81 | EVG | Enable Vertical Guard | 0 (disable) or 1 (enable) | 1 | 1 | FIX |

## • Screen adjustment

### 1. G2 Adjustment

1. Enter the service mode (see page 6).
2. Use the channel up or channel down buttons to enter the << BLUE-BACK >> function.
3. Set this to << BLUE-BACK: 0 >>, i.e. blue background is turned off.
4. Turn the set off at the mains.
5. Turn the set back on.
6. Set the picture control settings to normal.
7. Select the SCART input by pressing the TV/SCART button on the remote control. Do not connect an input to the SCART socket. A blank raster will appear.
8. Connect an oscilloscope to TP851 on the CRT PWB. The waveform as in figure 4 should be displayed.
9. Adjust the G2 control (screen voltage) so that the peak of this waveform is 3.0V +/-0.1V above the zero volt line.
10. Enter the service mode.
11. Turn the blue background function back on again - set << BLUE-BACK: 1 >>.
12. Turn off the receiver using the mains button.
13. The G2 adjustment is now complete.

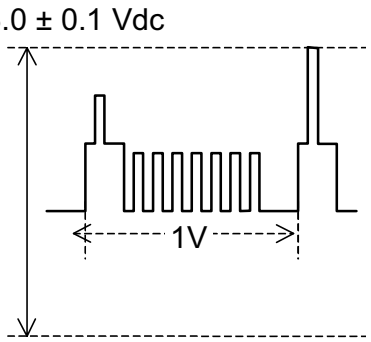


Fig. 4

### 2. Focus Adjustment

1. Receive a monoscope pattern signal at a level of 60 to 80 dBµV.
2. Set the picture settings to normal.
3. Adjust the focus potentiometer to obtain maximum definition.

## • AGC Adjustment

**1.** Tune the receiver into a colour bar signal on channel E-12.

**2.** Set the RF generator to an output signal strength of 59 dB/µV (+/-1dBµV) –75 Ohms.

**3.** Connect an oscilloscope to TP201. TP201 is one end of R201.

**4.** Enter the service mode (see page 6).

**5.** Use the channel up and channel down buttons to enter the AGC mode.

**6.** By using the volume up and the volume down buttons, adjust the AGC until the voltage on TP201 drops by 0.1V to 0.3V below its maximum value.

**7.** Change the input signal strength to 66-70dBµV and make sure that there is no noise apparent in the picture.

**8.** Turn the receiver off at the mains, this will exit the service mode and store the adjustment.

## • Geometry adjustment procedure

To adjust the geometry, follow the procedure outlined below:

1. Tune the set into a Philips test pattern.
2. Enter the service mode as described on page 6.
3. Use the channel up or channel down buttons to enter the desired mode
4. Use the volume buttons to achieve correct setting.
5. When adjustments are complete, use the stand-by button to turn off the set. The adjustment values will be stored at this point.

V-LIN
Adjust the vertical linearity control so that the picture centring is as shown in figure 5.

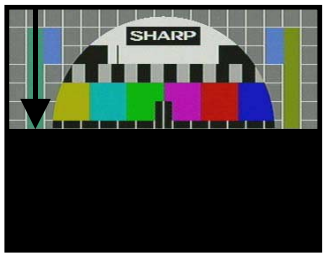


Fig. 5

V-AMP
Adjust the vertical amplitude control so that the picture overscans as shown in figure 6.

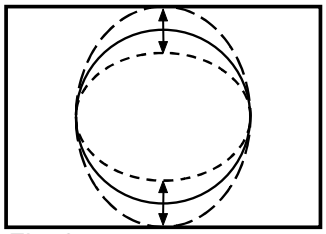


Fig. 6

V-CENT
Adjust the vertical centring control so that the picture is centred as shown in figure 7.

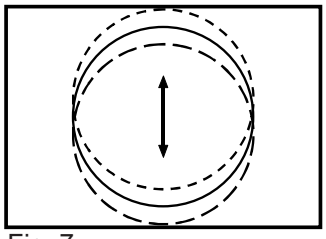


Fig. 7

H-CENT
Adjust the horizontal centring control so that the picture is centred as shown in figure 8.

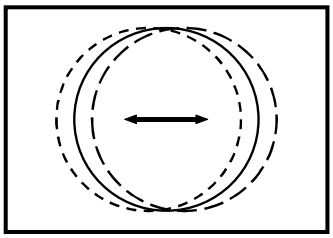


Fig. 8

## • Colour adjustment procedure

The following adjustments should only be carried out when the CRT or IC801 are replaced.

**Notes:**

- This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 700 µA.
- The red value «DRI-RS» should be fixed to 42. (Refer to “How to access service mode” section).
- «DRI-GS» adjustment alters “Y” coordinate.
- «DRI-BS» adjustment alters “X” and “Y” coordinates.

**Adjustment method 1** (using the signal generator, varying the picture signal)

1. Adjust G2.
2. Input a white pattern with burst signal from SCART.
3. Position the colorimeter in the centre of screen.
4. Adjusting input signal level, select a luminance of 70 nits.
5. Operate again in “service mode“ and select «DRI-GS» and/or «DRI-BS» locations to obtain colour coordinates:

| X | Y | Screen temperature |
|---|---|---|
| 0.304 ± 0.015 | 0.306 ± 0.015 | 7250º K-11 MPCD |

6. Reset the T V with the mains switch button to store the adjustment and exit service mode.
7. Check colour coordinates “X” and “Y” at 20 a 120 Nits. It may be necessary to repeat the same procedure to obtain the above values.

**Adjustment method 2** (using the signal generator, with a fixed picture signal)

1. Adjust G2.
2. Tune a white pattern with burst signal.
3. Operate in “service mode”:
4. Using «SUB-CON», select a luminance of 70 nits.
5. Operate again in “service mode“ and select «DRI-GS» and/or «DRI-BS» locations to obtain colour coordinates:

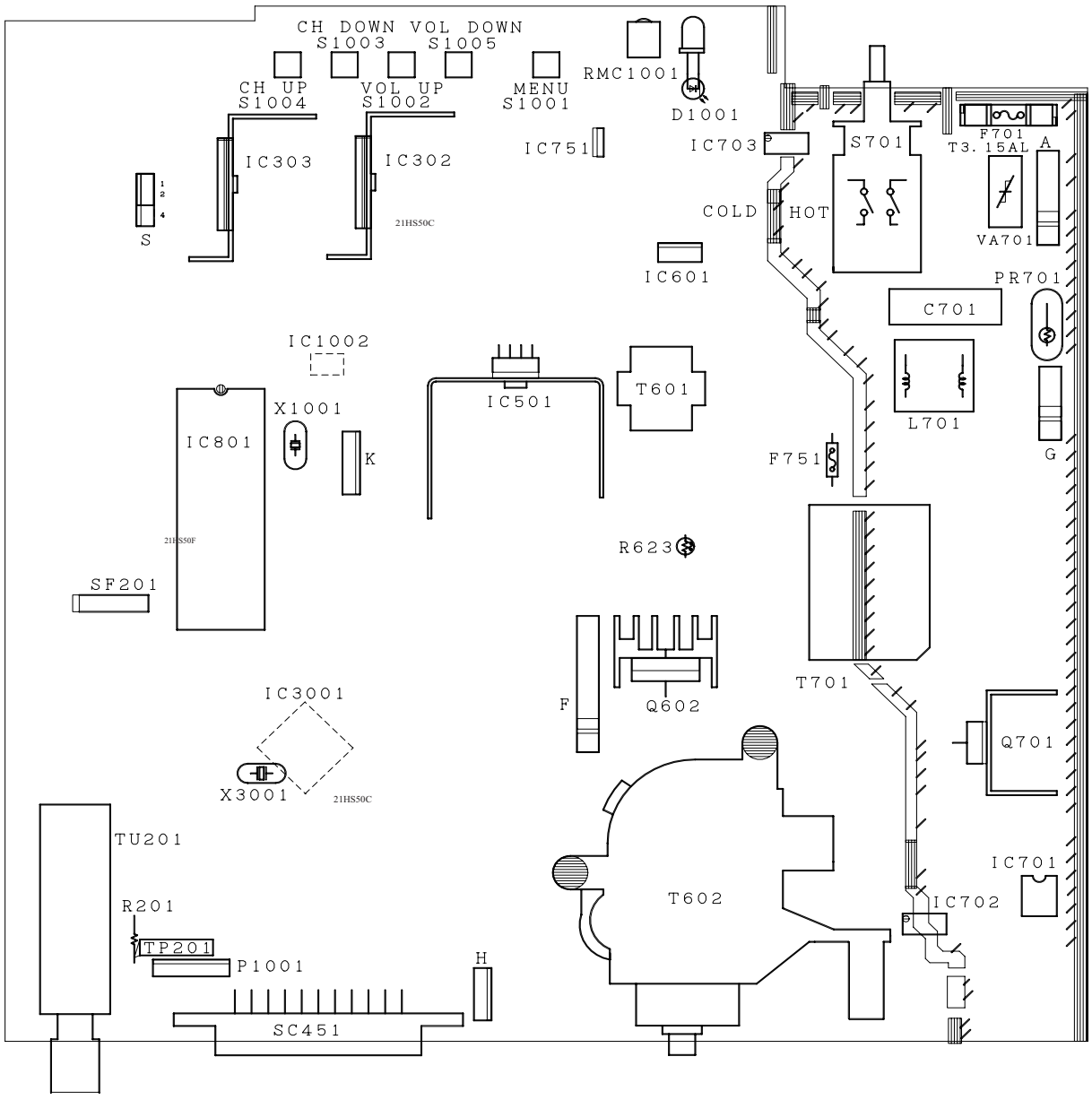
| X | Y | Screen temperature |
|---|---|---|
| 0.304 ± 0.015 | 0.306 ± 0.015 | 7250º K-11 MPCD |

6. Select «SUB-CON». Return data to “63”.
7. Reset the TV with the mains switch button to store the adjustment and exit service mode.
8. Check colour coordinates “X” and “Y” at 20 a 120 Nits. It may be necessary to repeat the same procedure to obtain the above values.

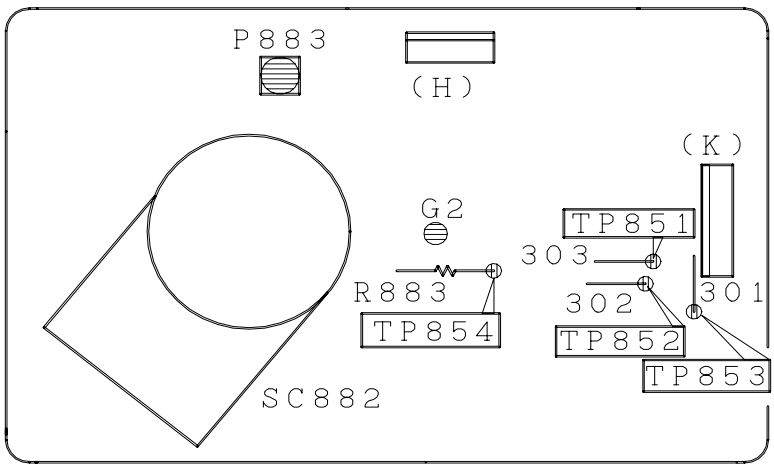
# CHASSIS LAYOUT

## Mother unit

PWB－A




## CRT unit



# LED FLASHING CODE

PURPOSE: The LED indicates the power mode,ocurred I²C error and On timer

INPUT:
- Current power mode
- I²C Errors
- On timer

Processing:
- If in Stand-by mode and On timer inactive then switch LED off.
- If in Stand-by and On timer active
  set LED to blinking, (switch on and off at 1 Hz with a 50 % duty cycle).
- If in POWER-ON mode, switch LED on.
- If an I²C error occurred, let the LED blink at 1 Hz, 50 % duty cycle.

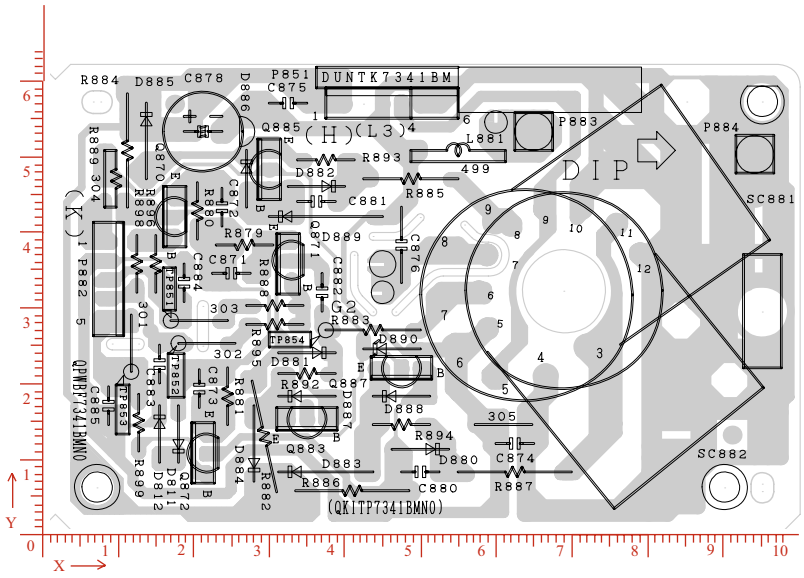
For the blinking times see the Table below.

Note: Only when an I²C error occurs for a number of times, or for a number of seconds, the I²C error is handled by the system (that is ,only then the set will go to stand-by, the led starts blinking).

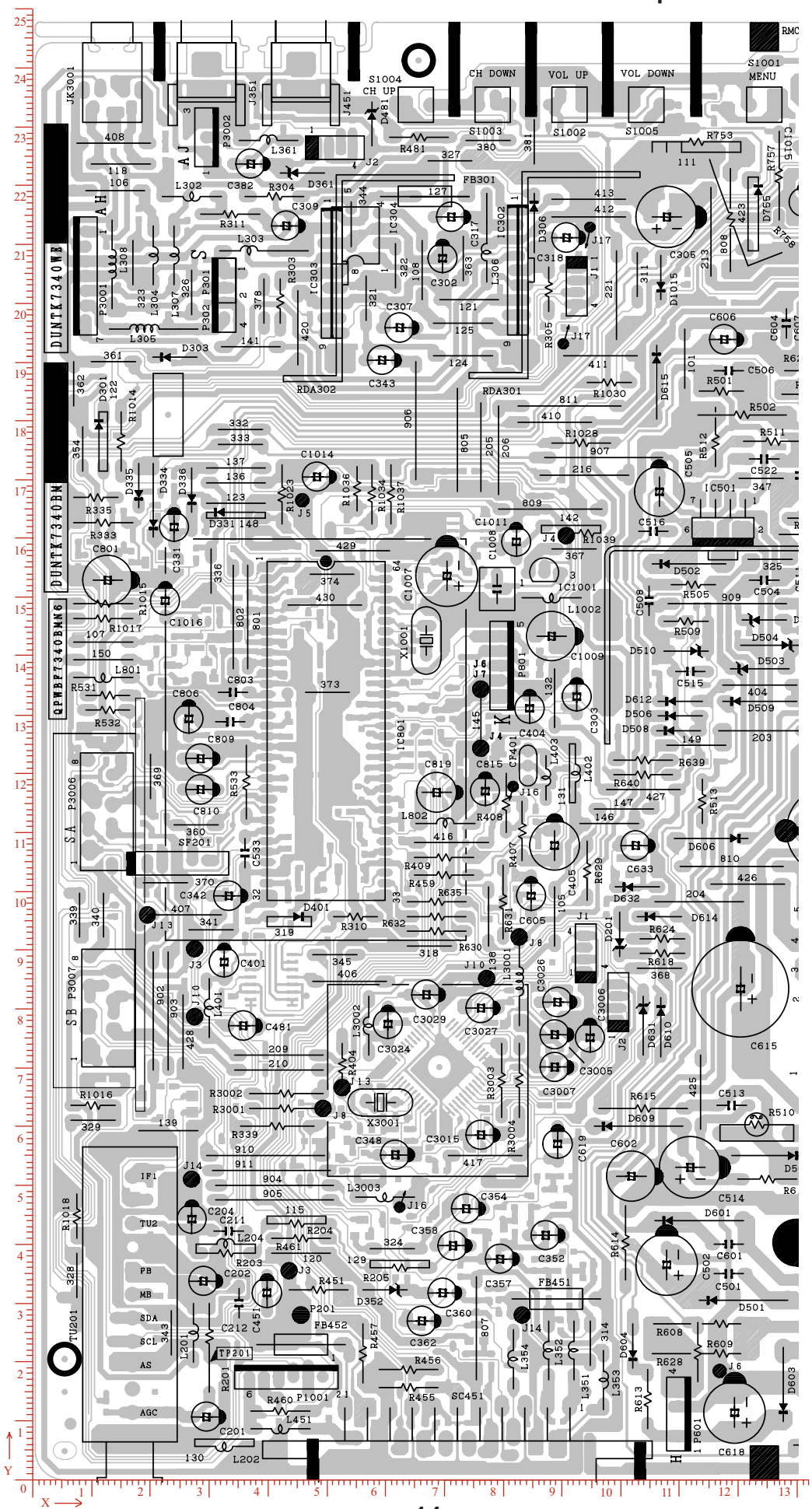
| IC/Module Name | Slave Address | Bus Error LED Blinking Time | Remarks | Ref. No. |
|---|---|---|---|---|
| M24C04,M24C08 | A0,A2 | 2 | 512x8 EEPROM,1024x8 EEPROM | IC1002 |
| TDA935x/6x/8x | 8A | 3 | Address of internal TV processor | IC801 |
| VTST6HD64 or<br>CTF551 | C0<br>C0 | 6<br>6 | PLL Tuner | TU201 |
| MSP34x5G | 80 | 5 | Multistandard Sound Processor | IC3001 |

Table Error LED blinking times

## F 7341N0 PRINTED WIRING BOARD. Components side.



# F 7340N6 PRINTED WIRING BOARD. Component side



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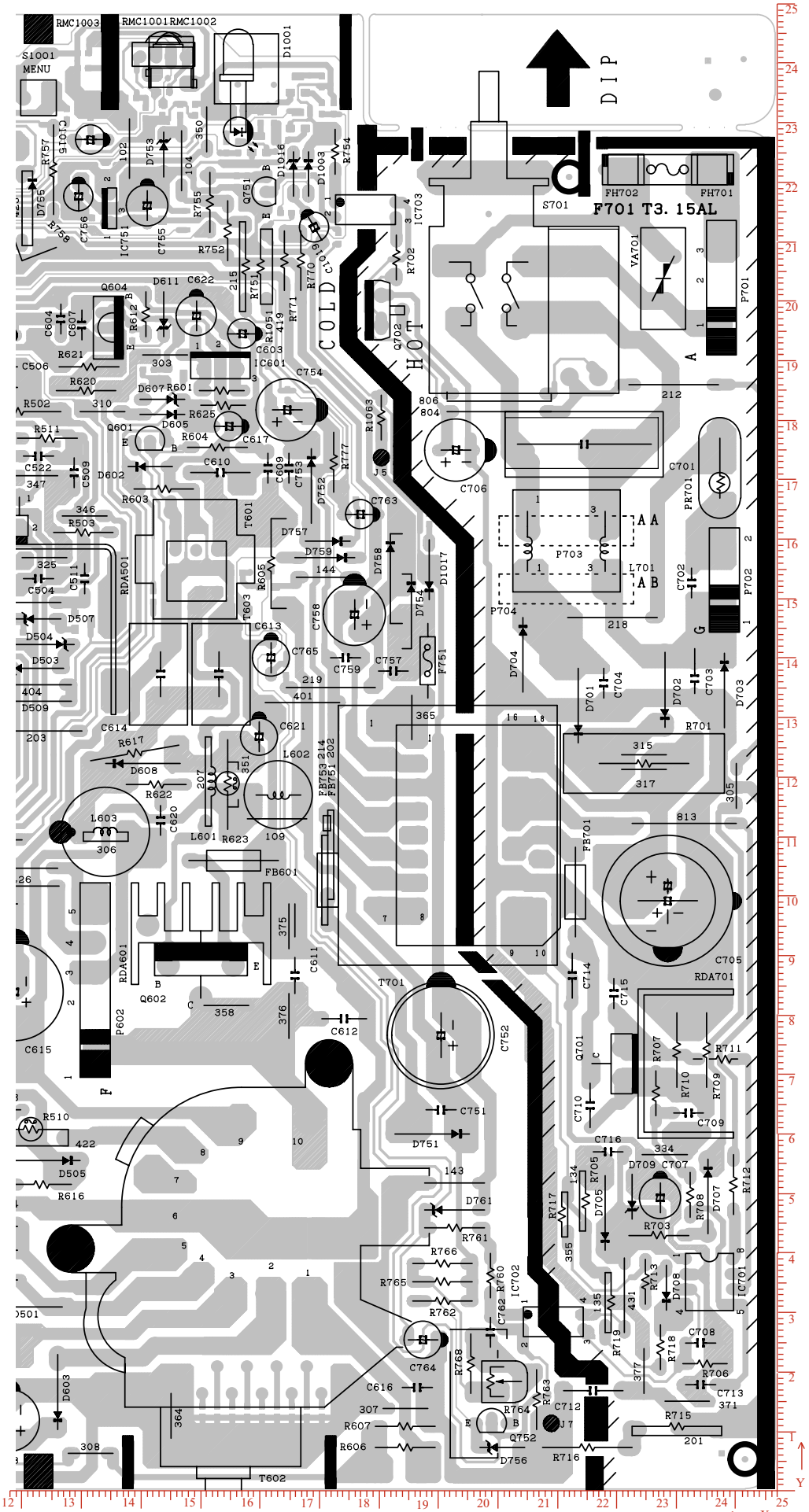
# F 7340N6 PRINTED WIRING BOARD. Component side.


RMC1003
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RMC1002
S1001
MENU
D1001
DIP
S701
FH702
FH701
F701 T3. 15AL
VA701
P701
COLD
HOT
IC703
Q702
R702
IC601
C754
C706
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PR701
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RDA701
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C762
R760
IC702
C615
P602
Q602
RDA601
C611
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FB601
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C621
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R623
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D608
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RDA501
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F751
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D1017
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R605
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C763
R1063
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C610
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D752
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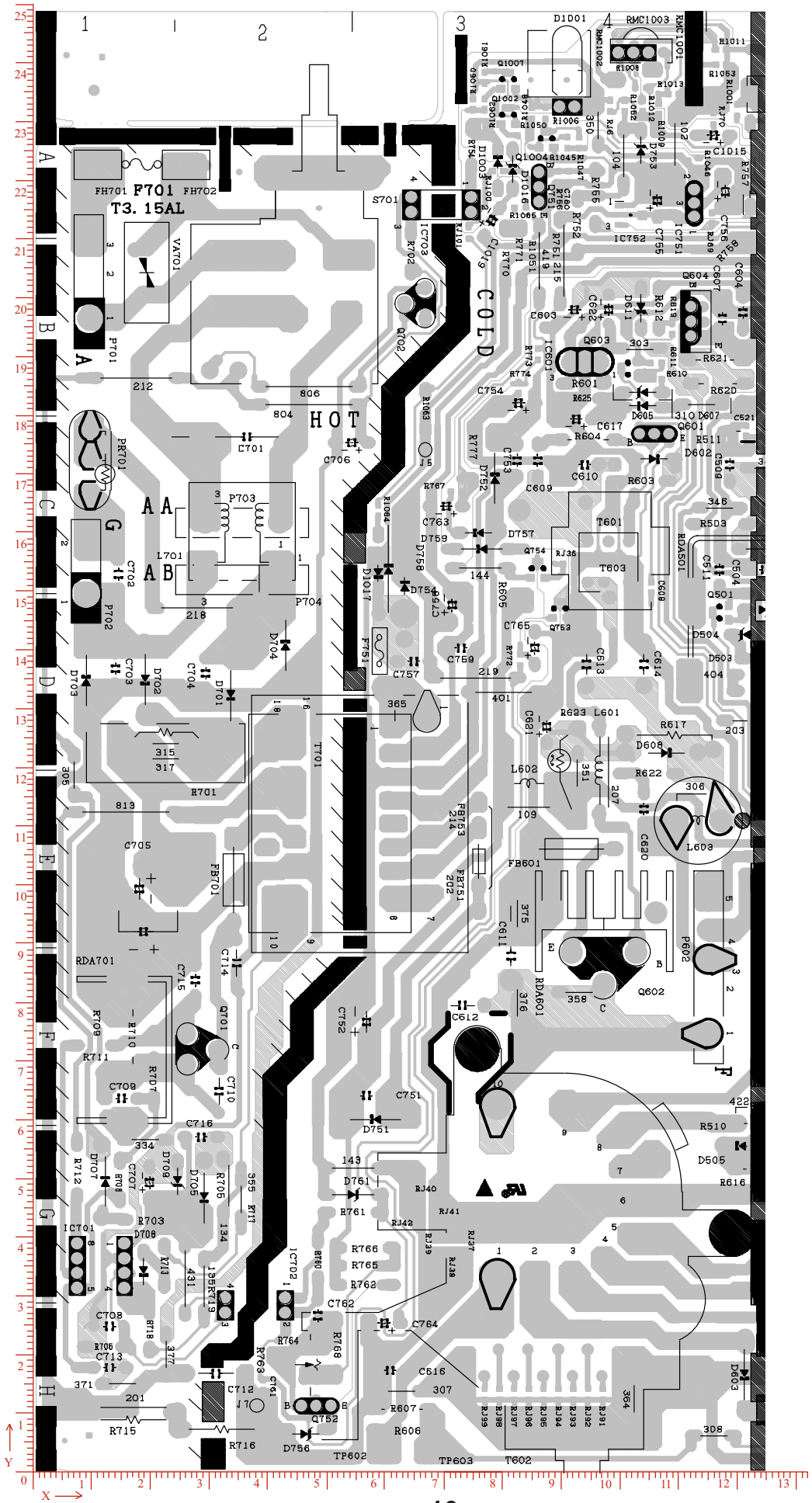
R561

# F 7340N6 PRINTED WIRING BOARD. Copper side.


HOT
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FH702
VA701
P701
PR701
P702
P703
P704
L701
S701
IC703
IC752
IC751
IC601
IC701
IC702
Q701
Q702
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Q754
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Q501
T601
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T602
TP602
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D1D01
RMC1003
RMC1002
RMC1001
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FB701
FB751
FB753
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RDA501
RDA601
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C513
C614
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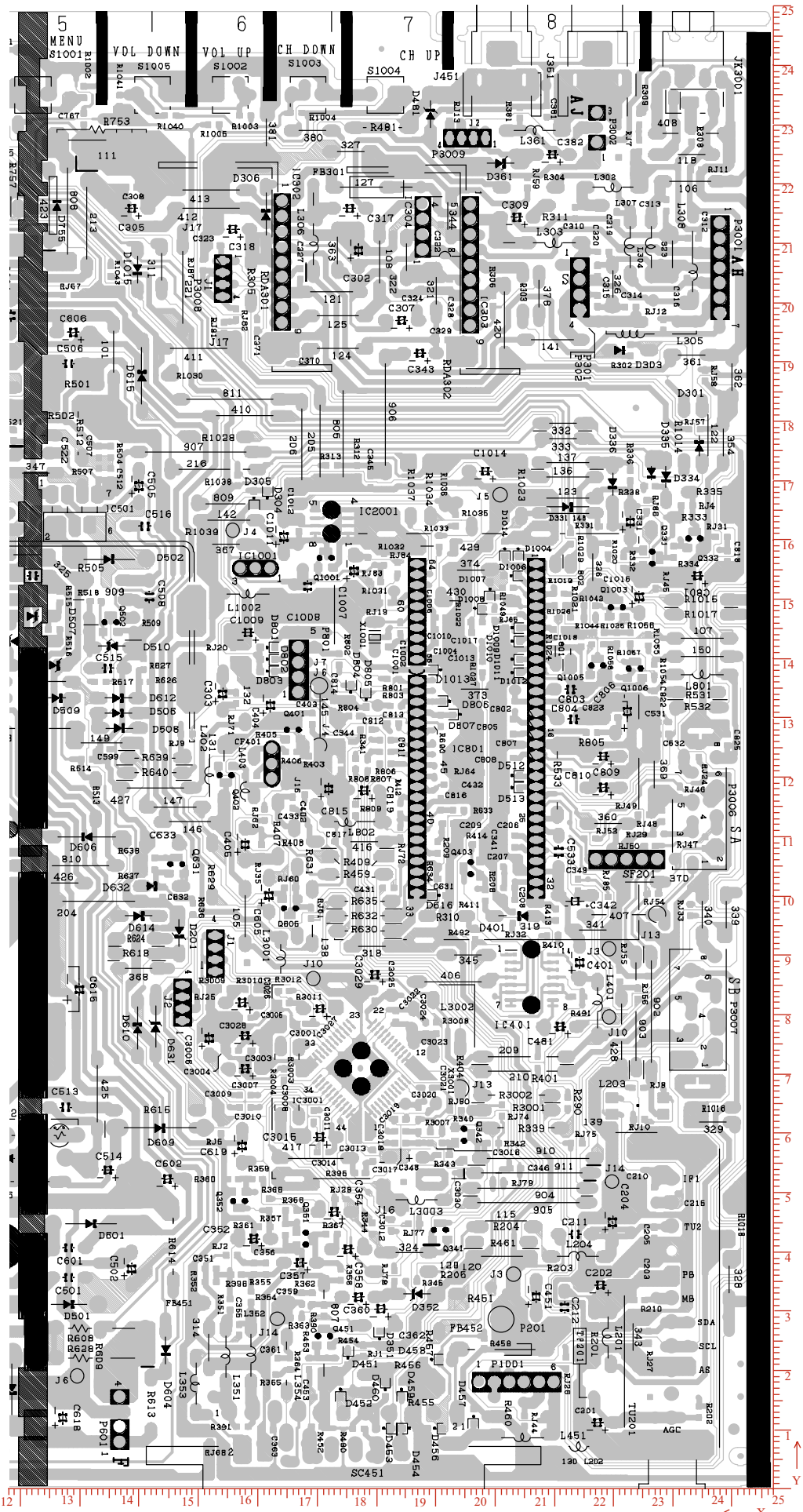
R1092
R1093

# F 7340N6 PRINTED WIRING BOARD. Copper side.

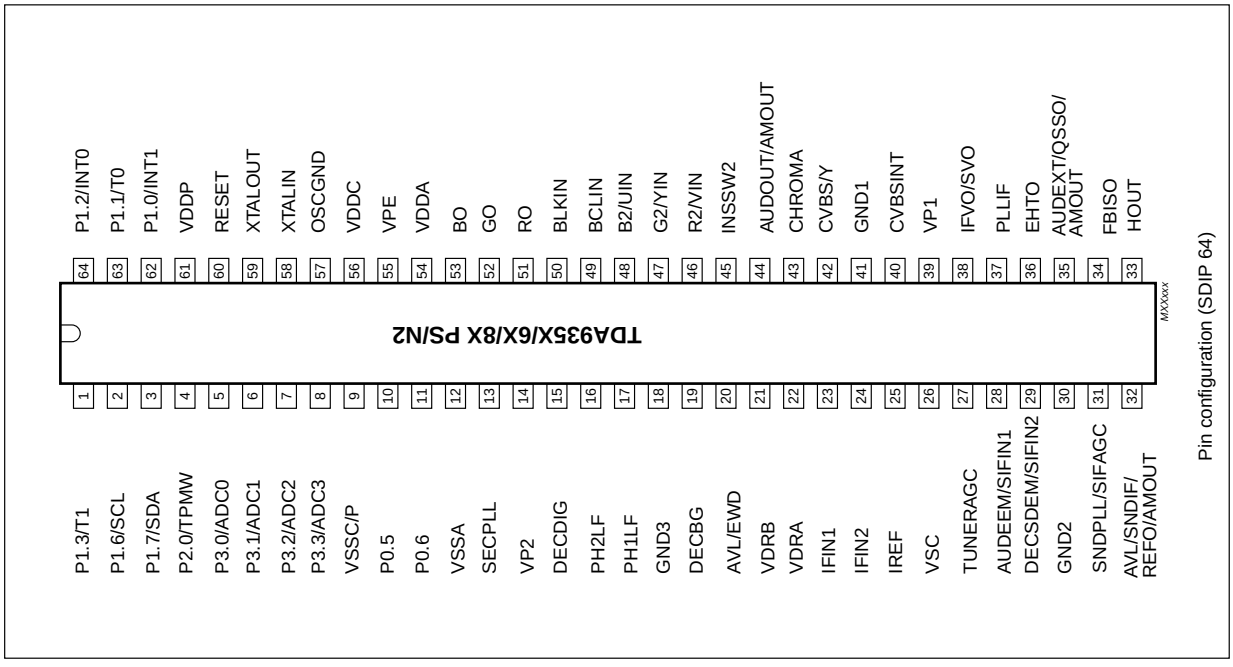


# ICs ADDITIONAL INFORMATION:

## TDA9351(IC801)

**QUICK REFERENCE DATA**

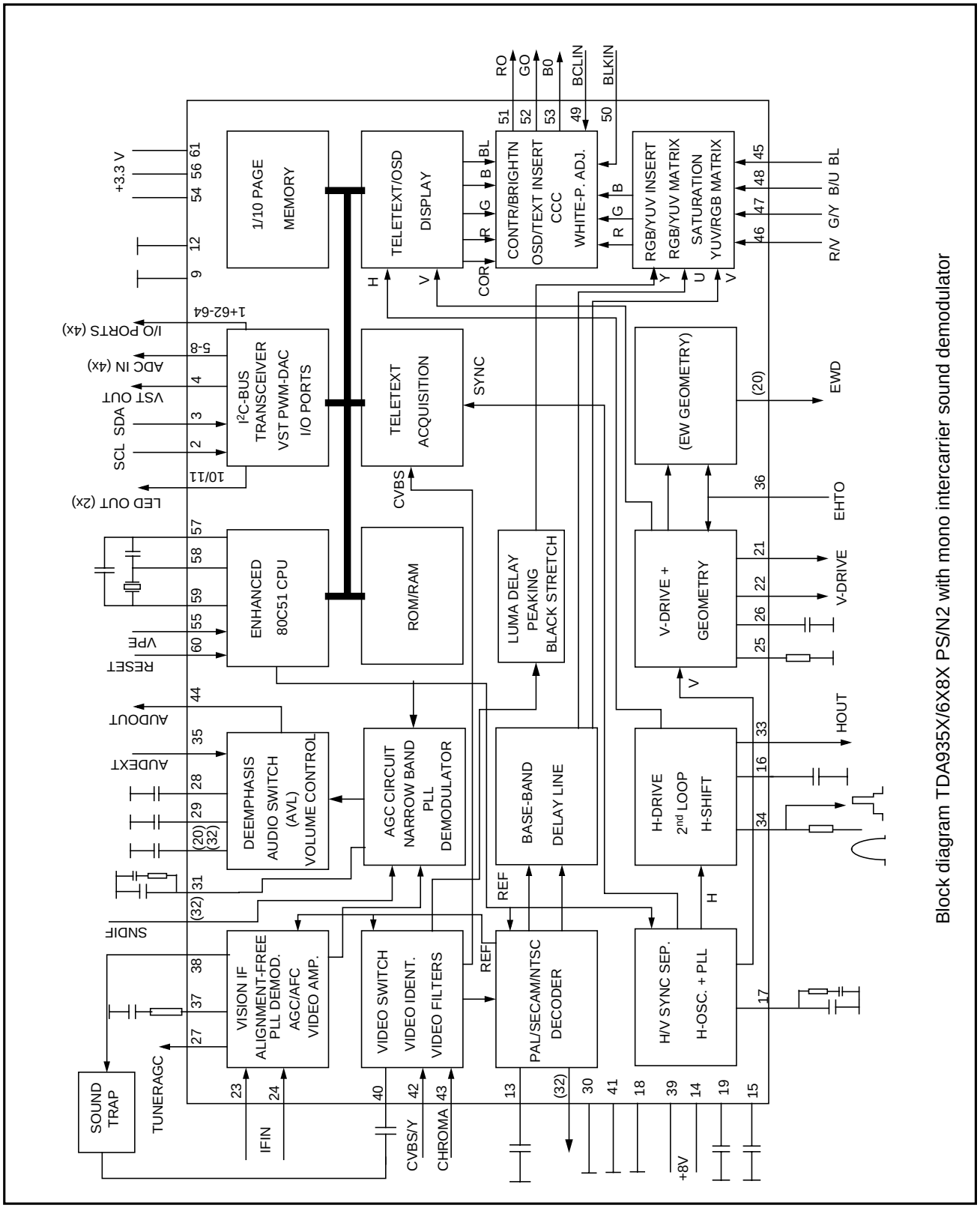
| SYMBOL | PARAMETER | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|
| **Supply** | | | | | |
| $V_P$ | supply voltages | – | 8.0/3.3 | – | V |
| $I_P$ | supply current | – | 135/60 | – | mA |
| **Input voltages** | | | | | |
| $V_{iVIFrms)}$ | video IF amplifier sensitivity (RMS value) | – | 75 | – | µV |
| $V_{iSIF(rms)}$ | QSS sound IF amplifier sensitivity (RMS value) | – | 60 | – | µV |
| $V_{iAUDIO(rms)}$ | external audio input (RMS value) | – | 500 | – | mV |
| $V_{iCVBS(p-p)}$ | external CVBS/Y input (peak-to-peak value) | – | 1.0 | – | V |
| $V_{iCHROMA(p-p)}$ | external chroma input voltage (burst amplitude) (peak-to-peak value) | – | 0.3 | – | V |
| $V_{iRGB(p-p)}$ | RGB inputs (peak-to-peak value) | – | 0.7 | – | V |
| $V_{iYIN(p-p)}$ | luminance input signal (peak-to-peak value) | – | 1.4 | – | V |
| $V_{iUVIN(p-p)}$ | U/V input signal (peak-to-peak value) | – | 1.33/1.05 | – | V |
| **Output signals** | | | | | |
| $V_{o(IFVO)(p-p)}$ | demodulated CVBS output (peak-to-peak value) | – | 2.5 | – | V |
| $V_{o(QSSO)(rms)}$ | sound IF intercarrier output in QSS versions (RMS value) | – | 100 | – | mV |
| $V_{o(AMOUT)(rms)}$ | demodulated AM sound output in QSS versions (RMS value) | – | 500 | – | mV |
| $I_{o(AGCOUT)}$ | tuner AGC output current range | 0 | – | 5 | mA |
| $V_{oRGB(p-p)}$ | RGB output signal amplitudes (peak-to-peak value) | – | 2.0 | – | V |
| $I_{oHOUT}$ | horizontal output current | 10 | – | – | mA |
| $I_{oVERT}$ | vertical output current (peak-to-peak value) | 1 | – | – | mA |
| $I_{oEWD}$ | EW drive output current | 1.2 | – | – | mA |



Pin configuration (SDIP 64)

## TDA9351(IC801)

### BLOCK DIAGRAM




Block diagram TDA935X/6X8X PS/N2 with mono intercarrier sound demodulator

## TDA9351(IC801)

**PINNING**

| SYMBOL | PIN | DESCRIPTION |
|---|---|---|
| P1.3/T1 | 1 | port 1.3 or Counter/Timer 1 input |
| P1.6/SCL | 2 | port 1.6 or $I^2C$-bus clock line |
| P1.7/SDA | 3 | port 1.7 or $I^2C$-bus data line |
| P2.0/TPWM | 4 | port 2.0 or Tuning PWM output |
| P3.0/ADC0 | 5 | port 3.0 or ADC0 input |
| P3.1/ADC1 | 6 | port 3.1 or ADC1 input |
| P3.2/ADC2 | 7 | port 3.2 or ADC2 input |
| P3.3/ADC3 | 8 | port 3.3 or ADC3 input |
| VSSC/P | 9 | digital ground for µ-Controller core and periphery |
| P0.5 | 10 | port 0.5 (8 mA current sinking capability for direct drive of LEDs) |
| P0.6 | 11 | port 0.6 (8 mA current sinking capability for direct drive of LEDs) |
| VSSA | 12 | analog ground of Teletext decoder and digital ground of TV-processor |
| SECPLL | 13 | SECAM PLL decoupling |
| VP2 | 14 | 2nd supply voltage TV-processor (+8V) |
| DECDIG | 15 | decoupling digital supply of TV-processor |
| PH2LF | 16 | phase-2 filter |
| PH1LF | 17 | phase-1 filter |
| GND3 | 18 | ground 3 for TV-processor |
| DECBG | 19 | bandgap decoupling |
| AVL/EWD (1) | 20 | Automatic Volume Levelling /East-West drive output |
| VDRB | 21 | vertical drive B output |
| VDRA | 22 | vertical drive A output |
| IFIN1 | 23 | IF input 1 |
| IFIN2 | 24 | IF input 2 |
| IREF | 25 | reference current input |
| VSC | 26 | vertical sawtooth capacitor |
| TUNERAGC | 27 | tuner AGC output |
| AUDEEM/SIFIN1(1) | 28 | audio deemphasis or SIF input 1 |
| DECSDEM/SIFIN2(1) | 29 | decoupling sound demodulator or SIF input 2 |
| GND2 | 30 | ground 2 for TV processor |
| SNDPLL/SIFAGC(1) | 31 | narrow band PLL filter /AGC sound IF |
| AVL/SNDIF/REF0/ AMOUT(1) | 32 | Automatic Volume Levelling / sound IF input / subcarrier reference output /AM output (non controlled) |
| HOUT | 33 | horizontal output |
| FBISO | 34 | flyback input/sandcastle output |
| AUDEXT/ QSSO/AMOUT(1) | 35 | external audio input /QSS intercarrier out /AM audio output (non controlled) |
| EHTO | 36 | EHT/overvoltage protection input |
| PLLIF | 37 | IF-PLL loop filter |
| IFVO/SVO | 38 | IF video output / selected CVBS output |
| VP1 | 39 | main supply voltage TV-processor (+8 V) |
| CVBSINT | 40 | internal CVBS input |
| GND1 | 41 | ground 1 for TV-processor |
| CVBS/Y | 42 | external CVBS/Y input |
| CHROMA | 43 | chrominance input (SVHS) |
| AUDOUT /AMOUT(1) | 44 | audio output /AM audio output (volume controlled) |

## TDA9351(IC801)

| SYMBOL | PIN | DESCRIPTION |
|---|---|---|
| INSSW2 | 45 | 2nd RGB / YUV insertion input |
| R2/VIN | 46 | 2nd R input / V (R-Y) input |
| G2/YIN | 47 | 2nd G input / Y input |
| B2/UIN | 48 | 2nd B input / U (B-Y) input |
| BCLIN | 49 | beam current limiter input / (V-guard input, note 2) |
| BLKIN | 50 | black current input / (V-guard input, note 2) |
| RO | 51 | Red output |
| GO | 52 | Green output |
| BO | 53 | Blue output |
| VDDA | 54 | analog supply of Teletext decoder and digital supply of TV-processor (3.3 V) |
| VPE | 55 | OTP Programming Voltage |
| VDDC | 56 | digital supply to core (3.3 V) |
| OSCGND | 57 | oscillator ground supply |
| XTALIN | 58 | crystal oscillator input |
| XTALOUT | 59 | crystal oscillator output |
| RESET | 60 | reset |
| VDDP | 61 | digital supply to periphery (+3.3 V) |
| P1.0/INT1 | 62 | port 1.0 or external interrupt 1 input |
| P1.1/T0 | 63 | port 1.1 or Counter/Timer 0 input |
| P1.2/INT0 | 64 | port 1.2 or external interrupt 0 input |

**Note**

1. The function of pin 20, 28, 29, 31, 32, 35 and 44 is dependent on the IC version (mono intercarrier FM demodulator / QSS IF amplifier and East-West output or not) and on some software control bits. The valid combinations are given in table 1.
2. The vertical guard function can be controlled via pin 49 or pin 50. The selection is made by means of the IVG bit in subaddress 2BH.

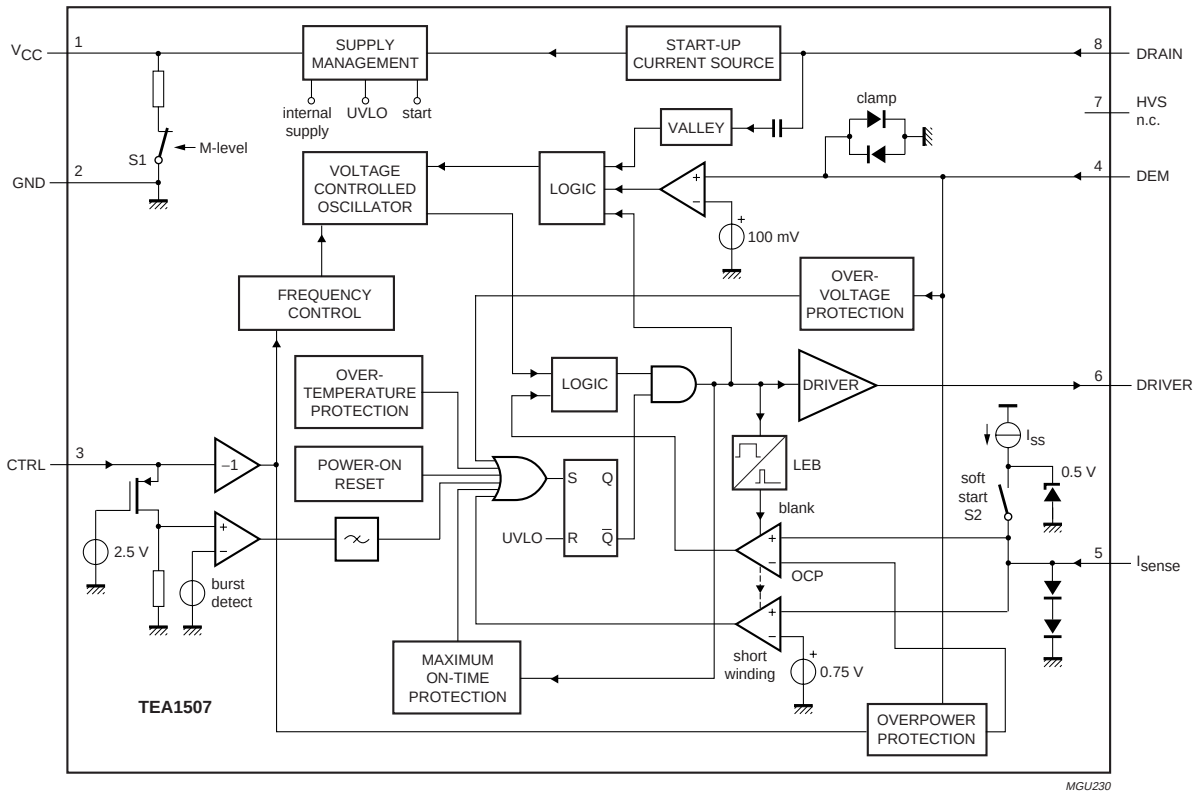
**Table 1** Pin functions for various versions

| IC version | FM-PLL version | | | | QSS version | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| East-West Y/N | N | | Y | | N | | | Y | | |
| CMB1/CMB0 bits | 00 | 01/10/11 | 00 | 01/10/11 | 00 | 01/10/11 | | 00 | 01/10/11 | |
| AM bit | – | – | – | – | – | 0 | 1 | – | 0 | 1 |
| Pin 20 | AVL | | EWD | | AVL | | | EWD | | |
| Pin 28 | AUDEEM | | | | SIFIN1 | | | | | |
| Pin 29 | DECSDEM | | | | SIFIN2 | | | | | |
| Pin 31 | SNDPLL | | | | SIFAGC | | | | | |
| Pin 32 | SNDIF(1) | REFO(2) | AVL/SNDIF(1) | REFO(2) | AMOUT | REFO(2) | | AMOUT | REFO(2) | |
| Pin 35 | AUDEXT | | | | AUDEXT | QSSO | AMOUT | AUDEXT | QSSO | AMOUT |
| Pin 44 | AUDOUT | | | | controlled AM or audio out | | | | | |

**Note**

1. When additional (external) selectivity is required for FM-PLL system pin 32 can be used as sound IF input. This function is selected by means of SIF bit in subaddress 28H.
2. The reference output signal is only available for the CMB1/CMB0 setting of 0/1. For the other settings this pin is a switch output (see also table 67).

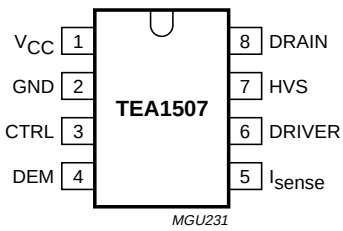
## TEA1507(IC701)




Block diagram.

### PINNING

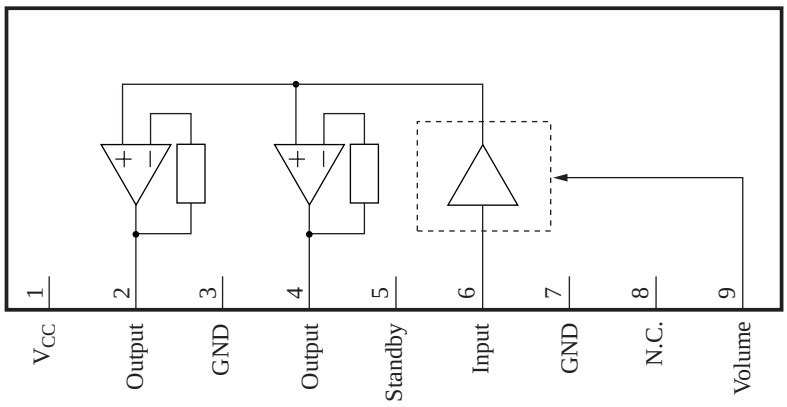
| SYMBOL | PIN | DESCRIPTION |
|---|---|---|
| $V_{CC}$ | 1 | supply voltage |
| GND | 2 | ground |
| CTRL | 3 | control input |
| DEM | 4 | input from auxiliary winding for demagnetization timing, OVP and OPP |
| $I_{sense}$ | 5 | programmable current sense input |
| DRIVER | 6 | gate driver output |
| HVS | 7 | high voltage safety spacer, not connected |
| DRAIN | 8 | drain of external MOS switch, input for start-up current and valley sensing |




Pin configuration.

## AN7523(IC303)

### Circuit Function Block Diagram



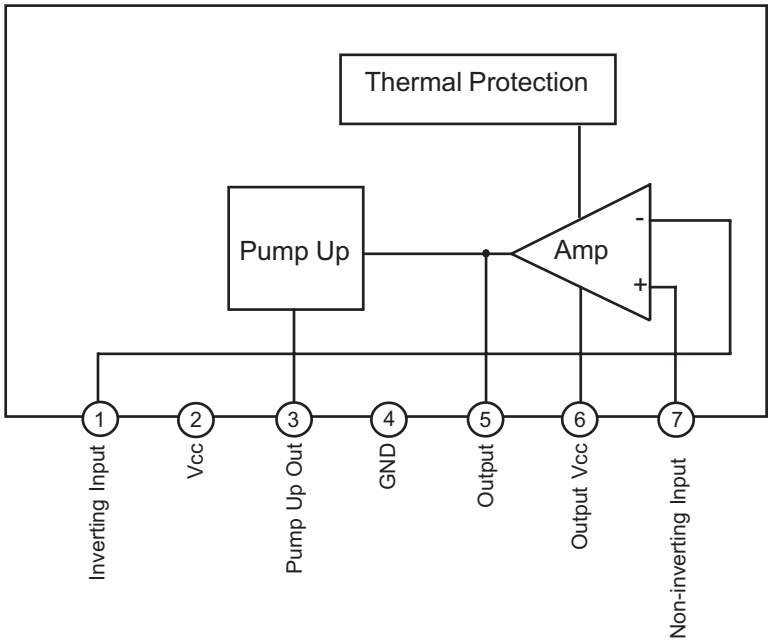

### Pin Descriptions

| Pin No. | Description |
|---|---|
| 1 | Vcc |
| 2 | Ch Output (+) |
| 3 | GND |
| 4 | Ch Output (-) |
| 5 | Standby |
| 6 | Ch Input |
| 7 | GND |
| 8 | N.C |
| 9 | Volume |

Note: Do not apply voltage or current to NC pin from outside

## AN5522(IC501)

### Circuit Function Block Diagram




### Pin Descriptions

| Pin No. | Pin Name |
|---|---|
| 1 | Inverting Input |
| 2 | Power Supply |
| 3 | Pump-up Output |
| 4 | GND |
| 5 | Vertical Output |
| 6 | Vertical Output Power Supply |
| 7 | Non-inverting Input |

## MSP34x5G (IC3001)

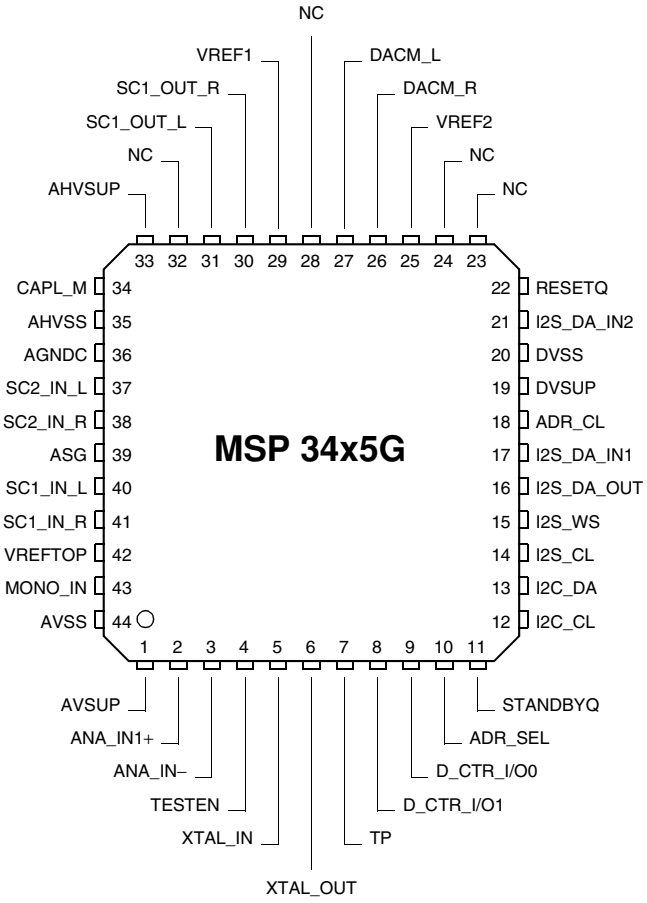
### Absolute Maximum Ratings

| Symbol | Parameter | Pin Name | Min. | Max. | Unit |
|---|---|---|---|---|---|
| $T_A$ | Ambient Operating Temperature | – | 0 | 70 | °C |
| $T_S$ | Storage Temperature | – | –40 | 125 | °C |
| $V_{SUP1}$ | First Supply Voltage | AHVSUP | –0.3 | 9.0 | V |
| $V_{SUP2}$ | Second Supply Voltage | DVSUP | –0.3 | 6.0 | V |
| $V_{SUP3}$ | Third Supply Voltage | AVSUP | –0.3 | 6.0 | V |
| $dV_{SUP23}$ | Voltage between AVSUP and DVSUP | AVSUP, DVSUP | –0.5 | 0.5 | V |
| $P_{TOT}$ | Package Power Dissipation<br>PSDIP64<br>PSDIP52<br>PQFP80<br>PLQFP64<br>PMQFP44 | AHVSUP, DVSUP, AVSUP | | <br>1300<br>1200<br>1000<br>960<br>960 | <br>mW<br>mW<br>mW<br>mW<br>mW |
| $V_{Idig}$ | Input Voltage, all Digital Inputs | | –0.3 | $V_{SUP2}$+0.3 | V |
| $I_{Idig}$ | Input Current, all Digital Pins | – | –20 | +20 | mA[1)] |
| $V_{Iana}$ | Input Voltage, all Analog Inputs | SCn_IN_s,[2)] MONO_IN | –0.3 | $V_{SUP1}$+0.3 | V |
| $I_{Iana}$ | Input Current, all Analog Inputs | SCn_IN_s,[2)] MONO_IN | –5 | +5 | mA[1)] |
| $I_{Oana}$ | Output Current, all SCART Outputs | SC1_OUT_s[2)] | [3)], [4)] | [3)], [4)] | |
| $I_{Oana}$ | Output Current, all Analog Outputs except SCART Outputs | DACM_s[2)] | [3)] | [3)] | |
| $I_{Cana}$ | Output Current, other pins connected to capacitors | CAPL_M, AGNDC | [3)] | [3)] | |

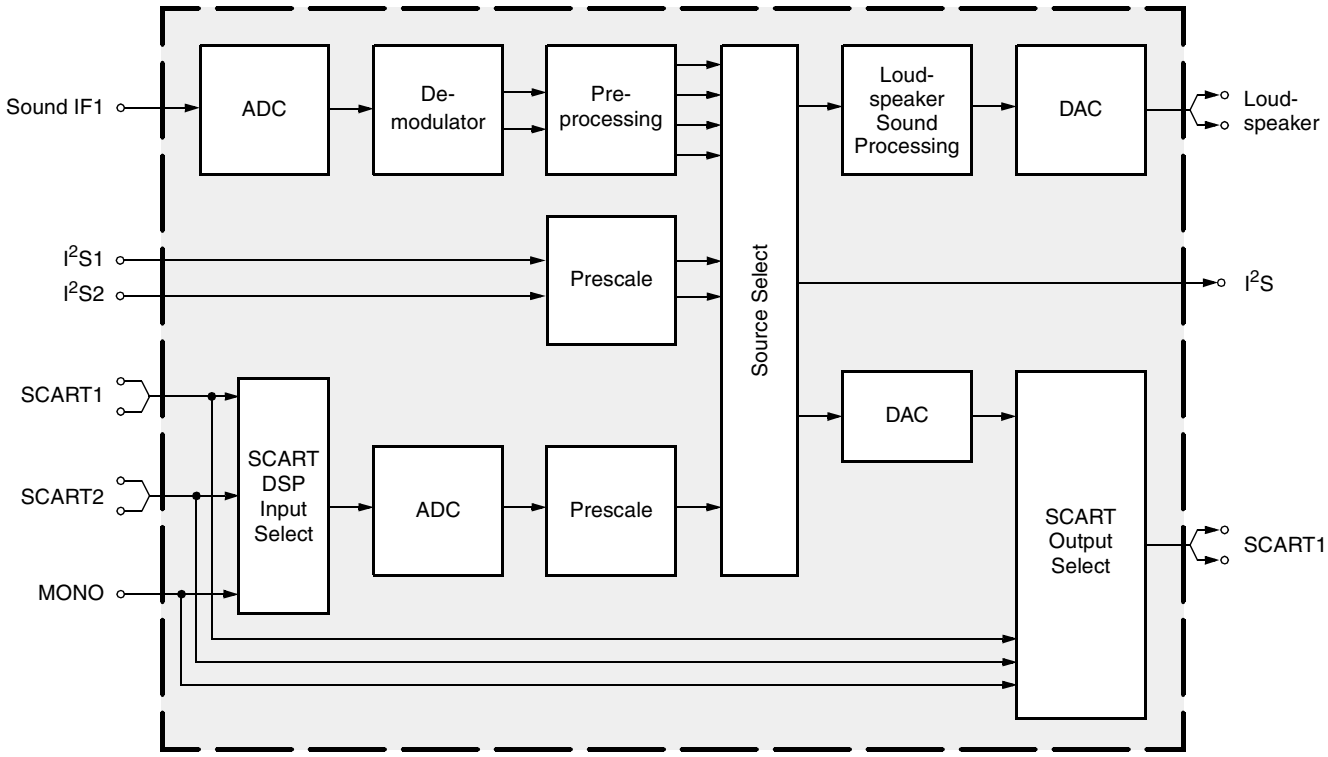
1) positive value means current flowing into the circuit
2) “n” means “1” or “2”, “s” means “L” or “R”
3) The Analog Outputs are short-circuit proof with respect to First Supply Voltage and Ground.
4) Total chip power dissipation must not exceed absolute maximum rating.

Stresses beyond those listed in the “Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating only. Functional operation of the device at these or any other conditions beyond those indicated in the “Recommended Operating Conditions/Characteristics” of this specification is not implied. Exposure to absolute maximum ratings conditions for extended periods may affect device reliability.

## MSP34x5G (IC3001)




PMQFP44 package




Simplified functional block diagram of MSP 34x5G

# SCHEMATIC DIAGRAM

## Description of Schematic Diagram

**Safety note:**

1. Disconnect the AC plug from the AC outlet before replacing parts.

2. Semiconductor heat sinks should be regarded as potential shock hazards when the chassis is operating.

**Important safety note:**

Parts marked with « ⚠ » ( ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

**CAUTION**
**This circuit diagram is original one, therefore there may be slight difference from yours.**

### Note:

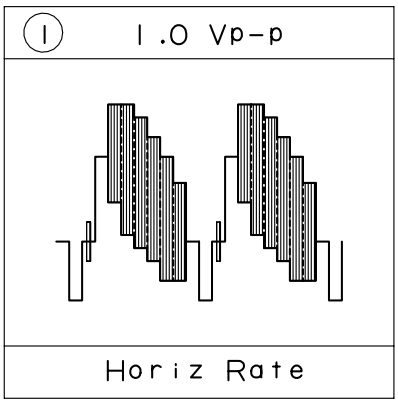
1. The unit of resistance «ohm»is omitted (K=1000 ohms. M= Megaohm).
2. All resistors are 1/16 watt. unless otherwise noted.
3. All capacitors are μF, unless otherwise noted (P=μμF).
4. The capacitor with Part No. RC-FZ9XXXBMNJ is designed to with stand 63V.
5. The capacitor with Part No. RC-FZ4XXXBMNJ is designed to with stand 50V.

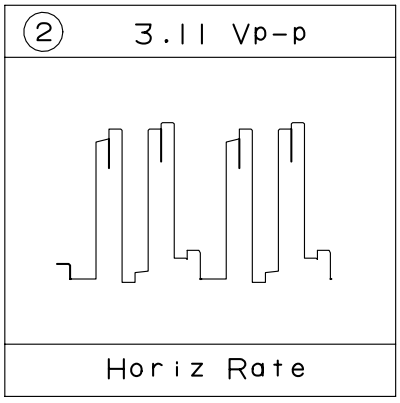
**Service precaution:**

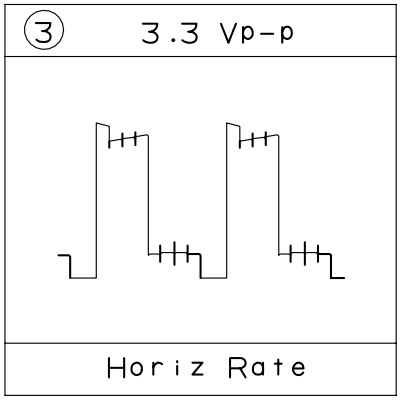
The area enclosed by this line is directly (⊢•—•–) connected with AC mains voltage.
When servicing the area, connect an insulating transformer between TV receiver and AC line to eliminate hazard of electric shock.

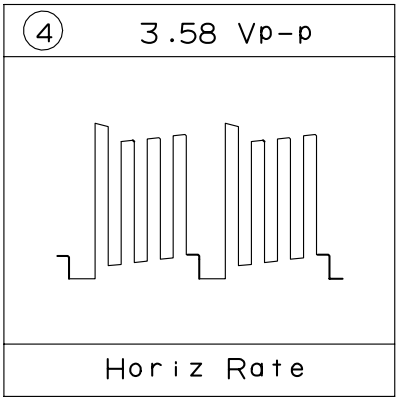
**Waveform measurement condition:**
Colour bar genetator signal of 70 dB from RF input.

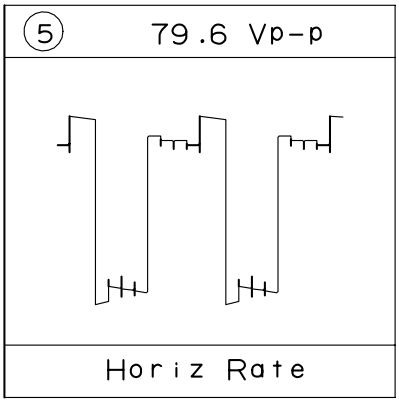
# WAVEFORMS

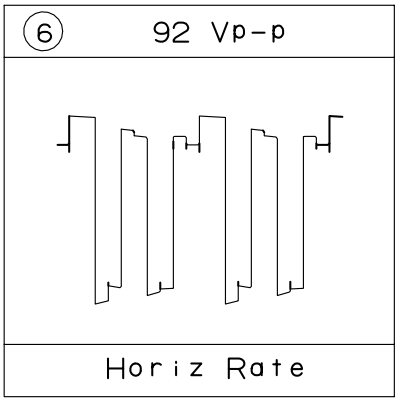


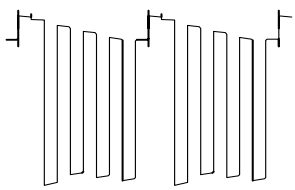



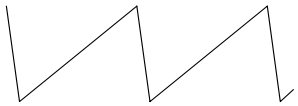



⑦ 90 Vp-p



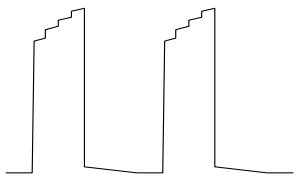
Horiz Rate

⑧ 3.14 Vp-p



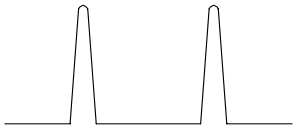
Vert Rate

⑨ 2.58 Vp-p



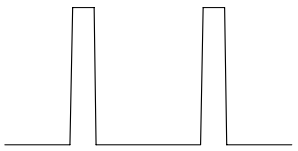
Horiz Rate

⑩ 120 Vp-p



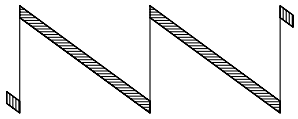
Horiz Rate

⑪ 9.2 Vp-p



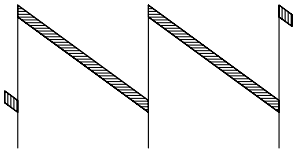
Horiz Rate

⑫ 0.14 Vp-p



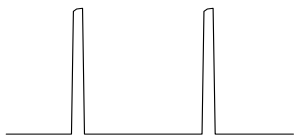
Vert Rate

⑬ 0.192 Vp-p



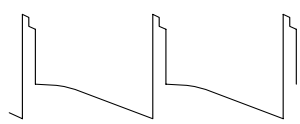
Vert Rate

⑭ 1.36 Vp-p



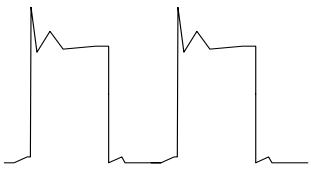
Vert Rate

⑮ 48.6 Vp-p



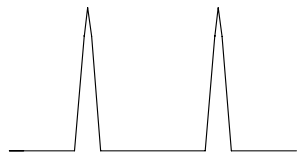
Vert Rate

⑯ 145 Vp-p



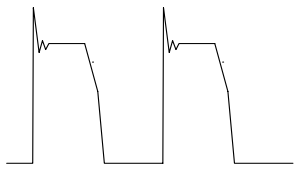
Horiz Rate

⑰ 1055 Vp-p



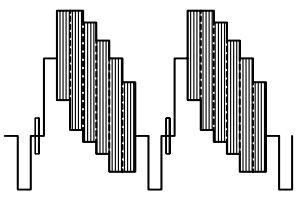
Horiz Rate

⑱ 612 Vp-p



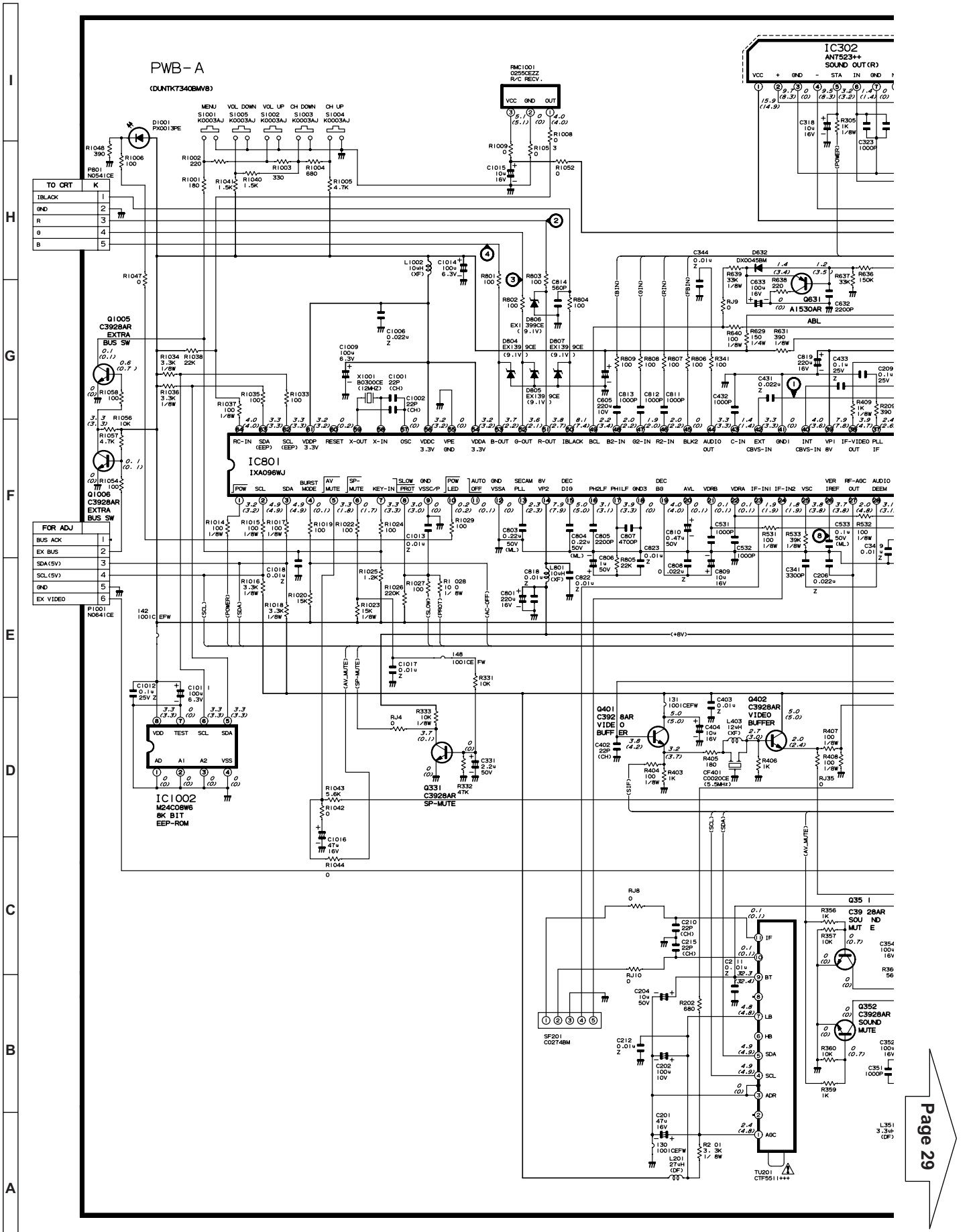
Vert Rate

⑲ 2.0 Vp-p

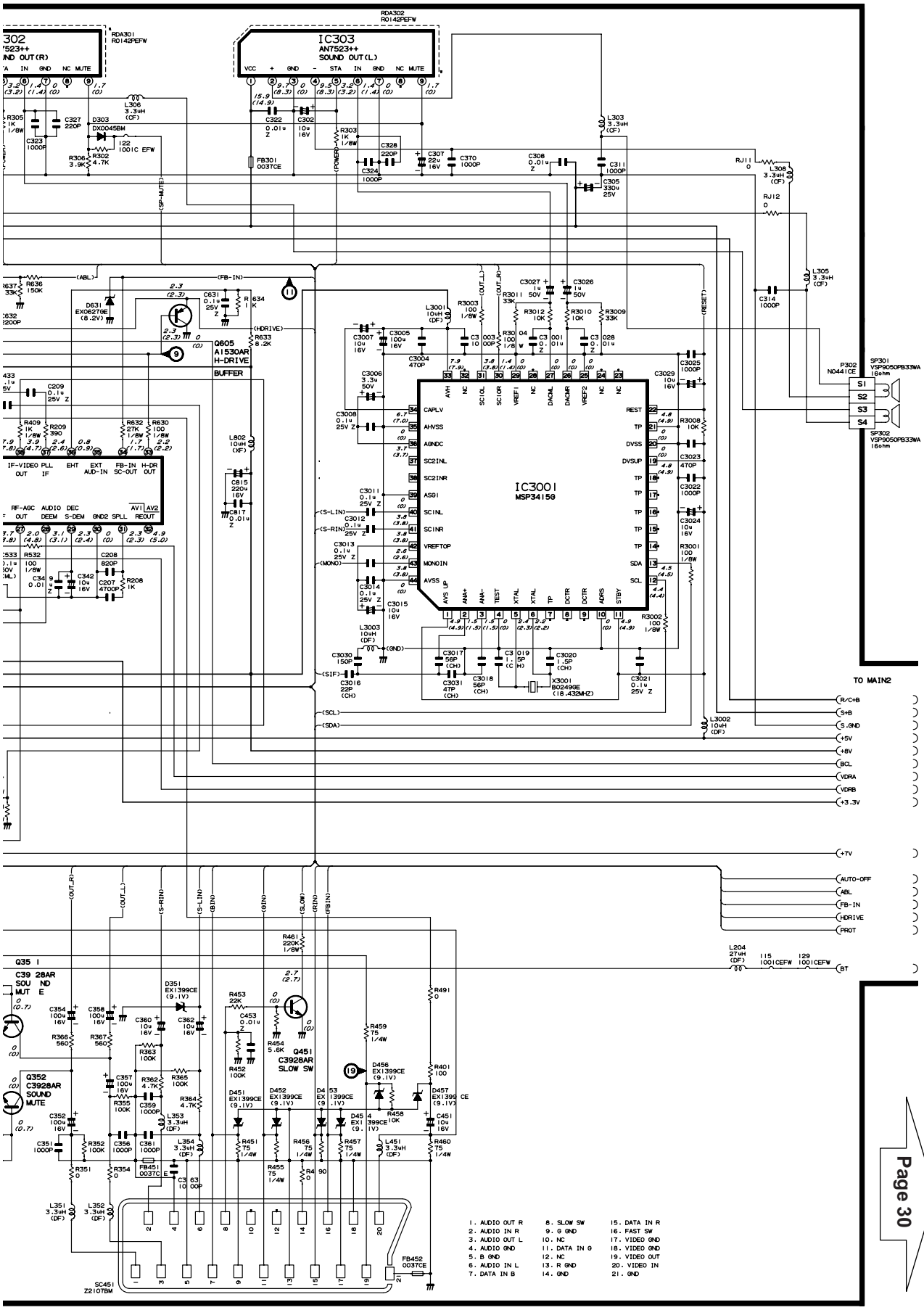


Horiz Rate

# SCHEMATIC DIAGRAM OF MOTHER UNIT (F7340N6, 00 Version)



# SCHEMATIC DIAGRAM OF MOTHER UNIT (F7340N6, 00 Version)

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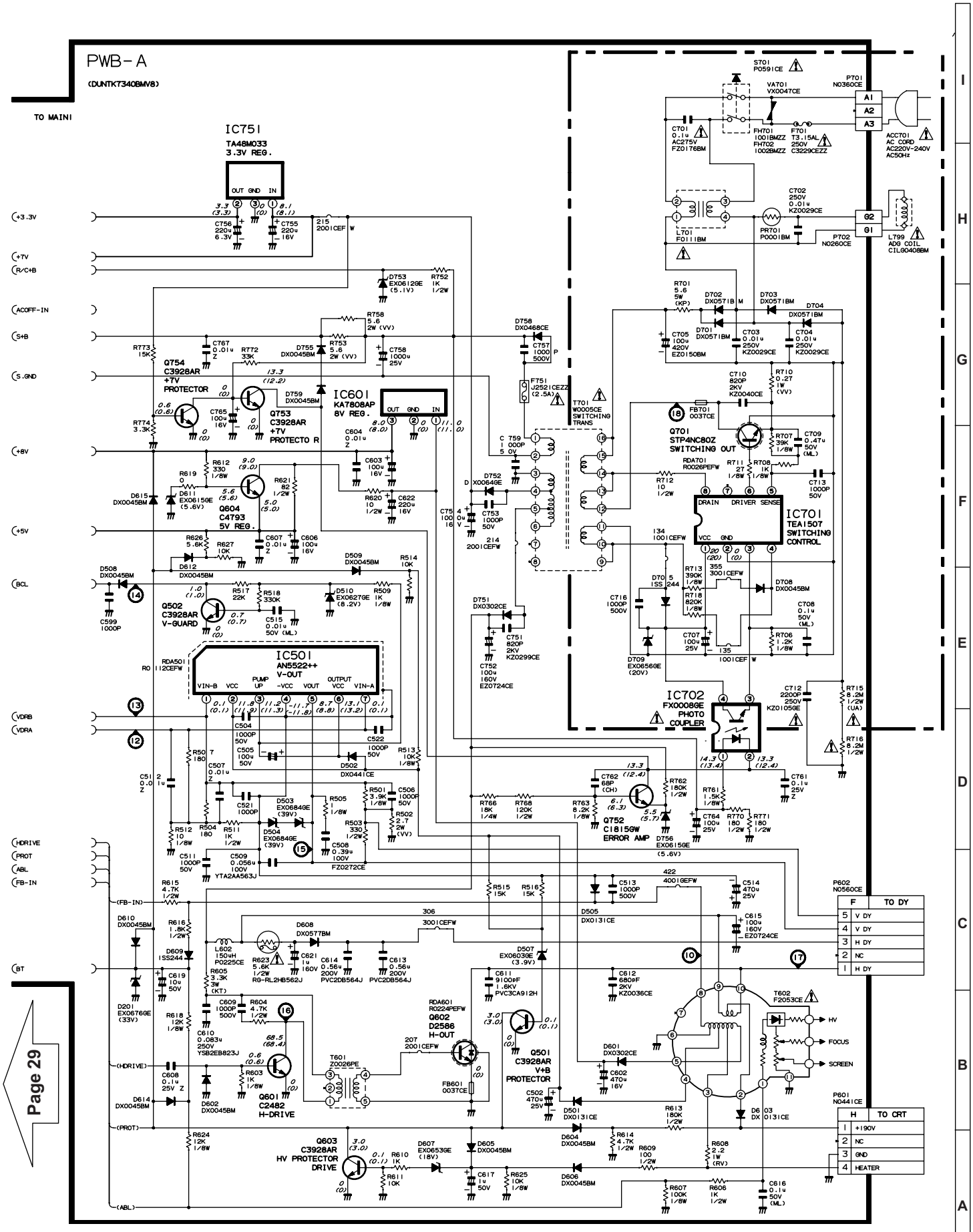
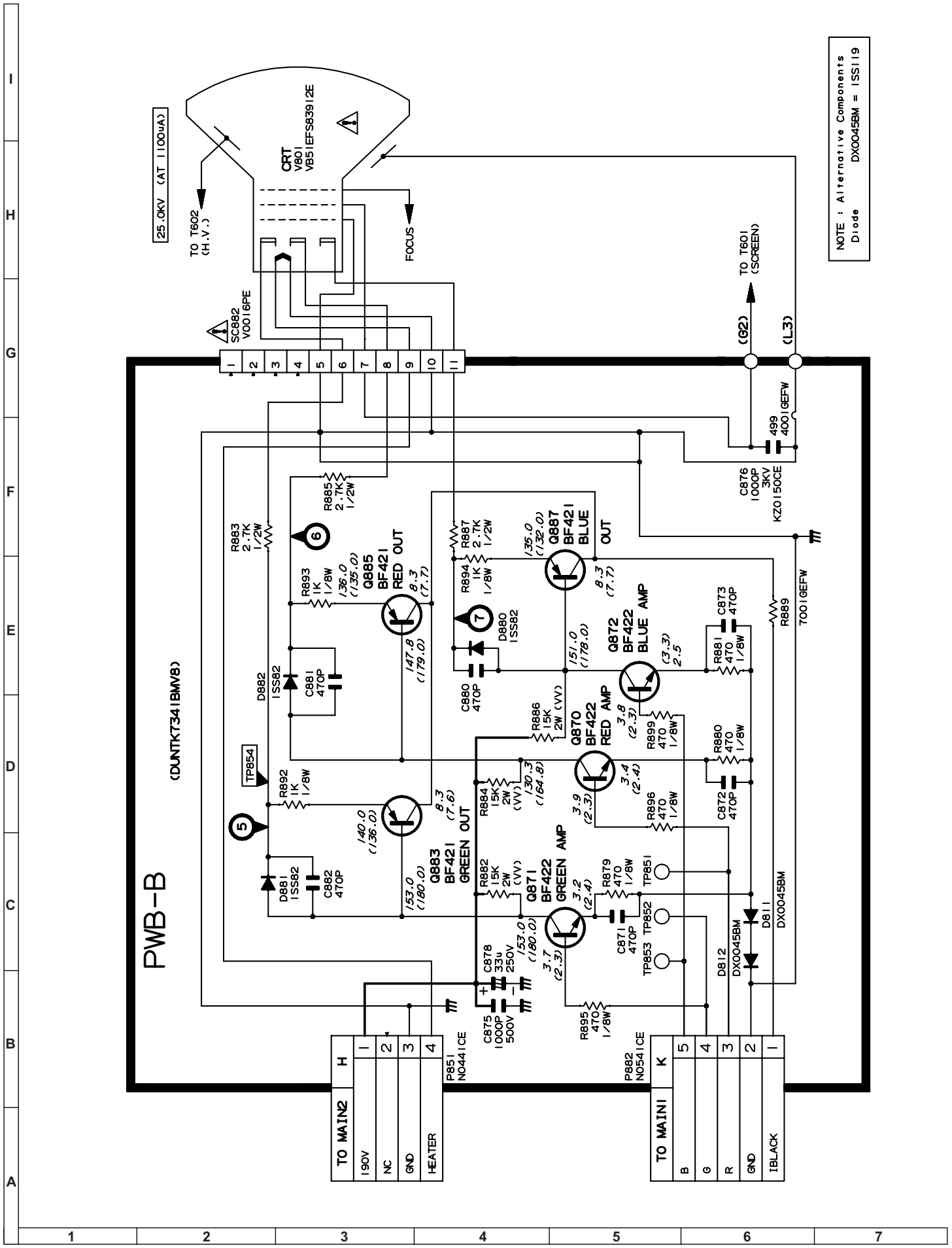
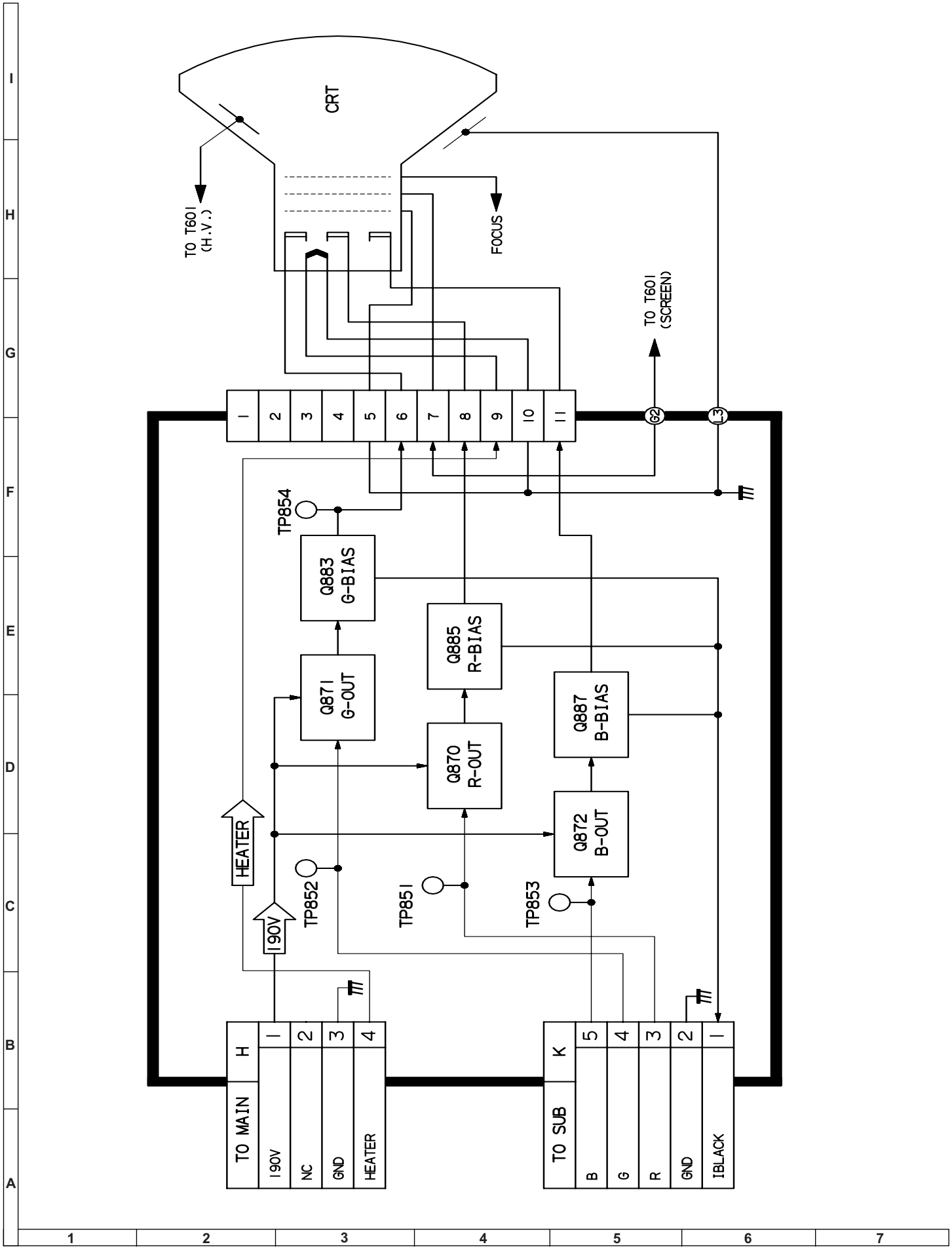
# SCHEMATIC DIAGRAM OF MOTHER UNIT (F7340N6, 00 Version)



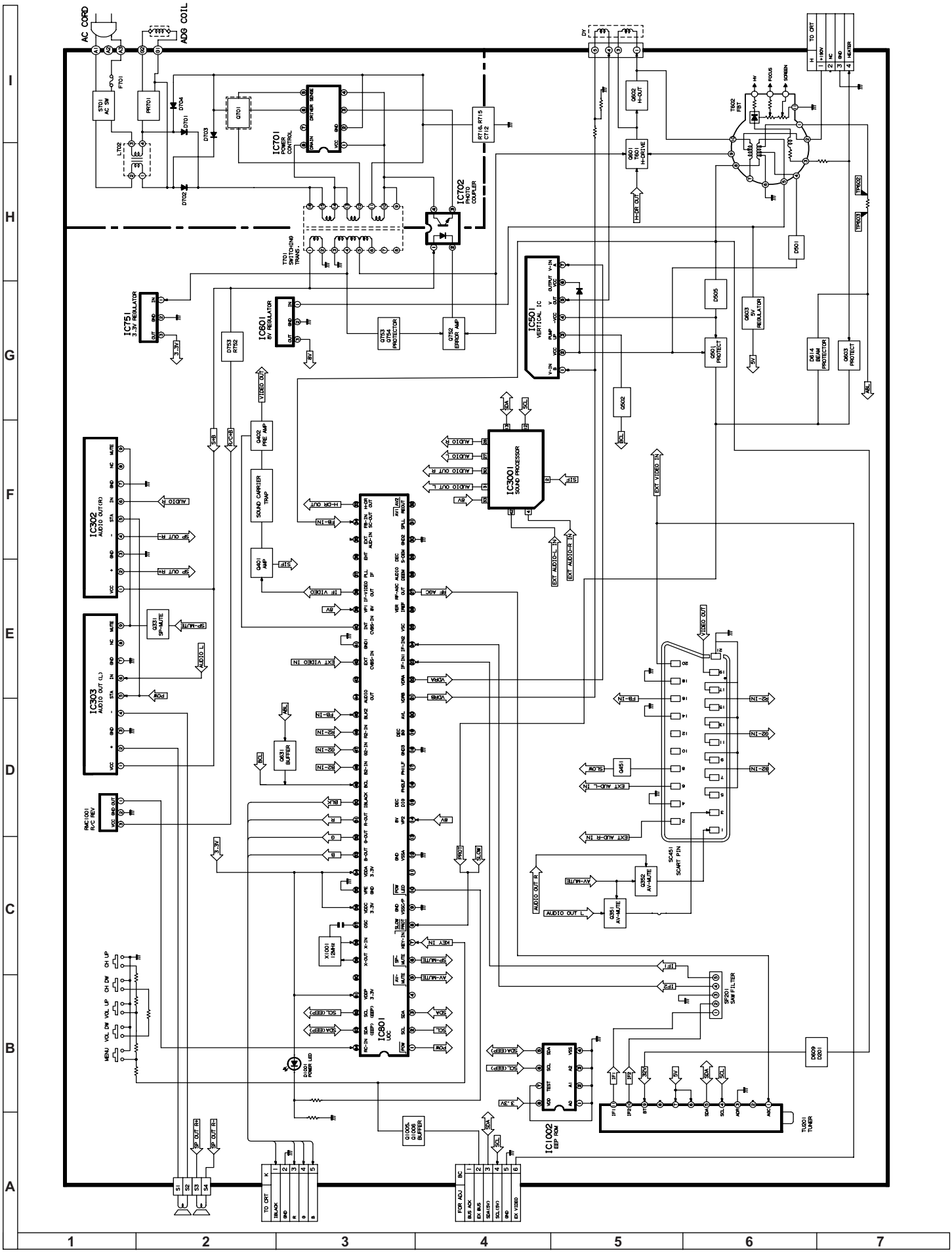
# SCHEMATIC DIAGRAM OF CRT (F7341N0, 00 Version)



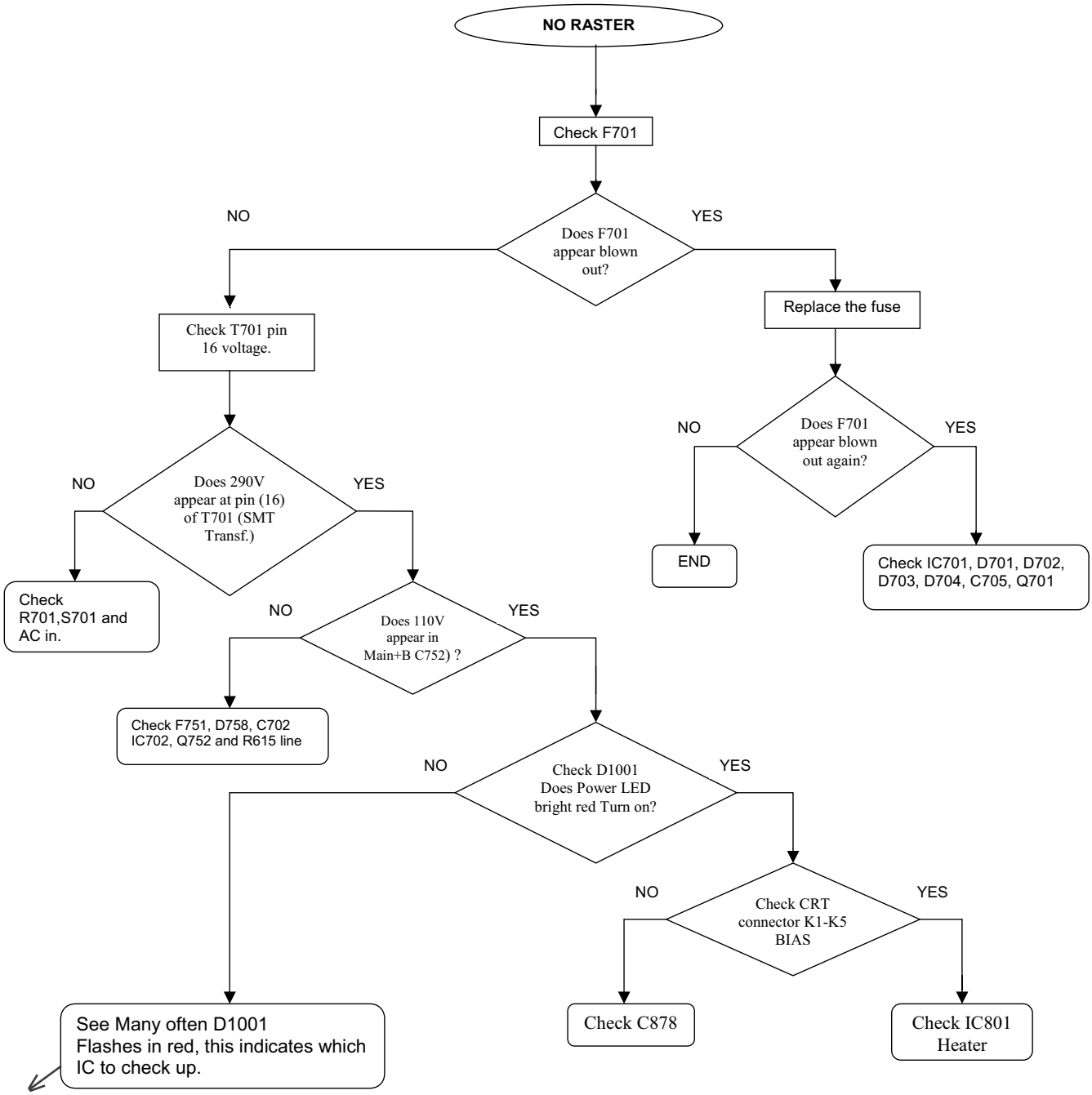
# CRT UNIT BLOCK DIAGRAM



# MOTHER UNIT BLOCK DIAGRAM



# TROUBLESHOOTING TABLES.




**Explanation:**

NVM
(IC1002)

2 Times Flash

TV Processor
(IC801)

3 Times Flash

Sound Processor
(IC3001)

5 Times Flash

TUNER
(TU201)

6 Times Flash

Protector Circuit
(R1028,D615,D612,D509,D510,D614,D604,D605,Q603)

Power LED dark red

Note: 4 Times Flash change to NVM-DATA (S-L)

# TROUBLESHOOTING TABLES.

## NEITHER VERTICAL NOR HORIZONTAL SYNCHRONIZATION

**CIRCUIT TO BE CHECKED:**
Sync. Separator Circuit.

Check pin33 and 34 of IC801.

## DEFECTIVE VERTICEL AMP. AND VERTICAL LINEARITY

Readjusted vertical size. (Bass Data)

Vertical linearity and size is abnormal.

Check R502,R505

## NO VERTICAL SCAN

Check IC501 bias.

***Normal***

Check C502 and C514.

***Abnormal***

Check IC501.

## NO SPECIFIC COLOUR

Is some colour produced in B/W broadcast reception?

**NO**

Check IC801,R801,R802, R803,D804,D805,D806 and Q801.

**YES**

Is the white balance properly adjusted?

**NO**

Readjusted the white balance.

**YES**

The picture colour is cyan.

Check Q870,Q885 and their adjacent circuits.

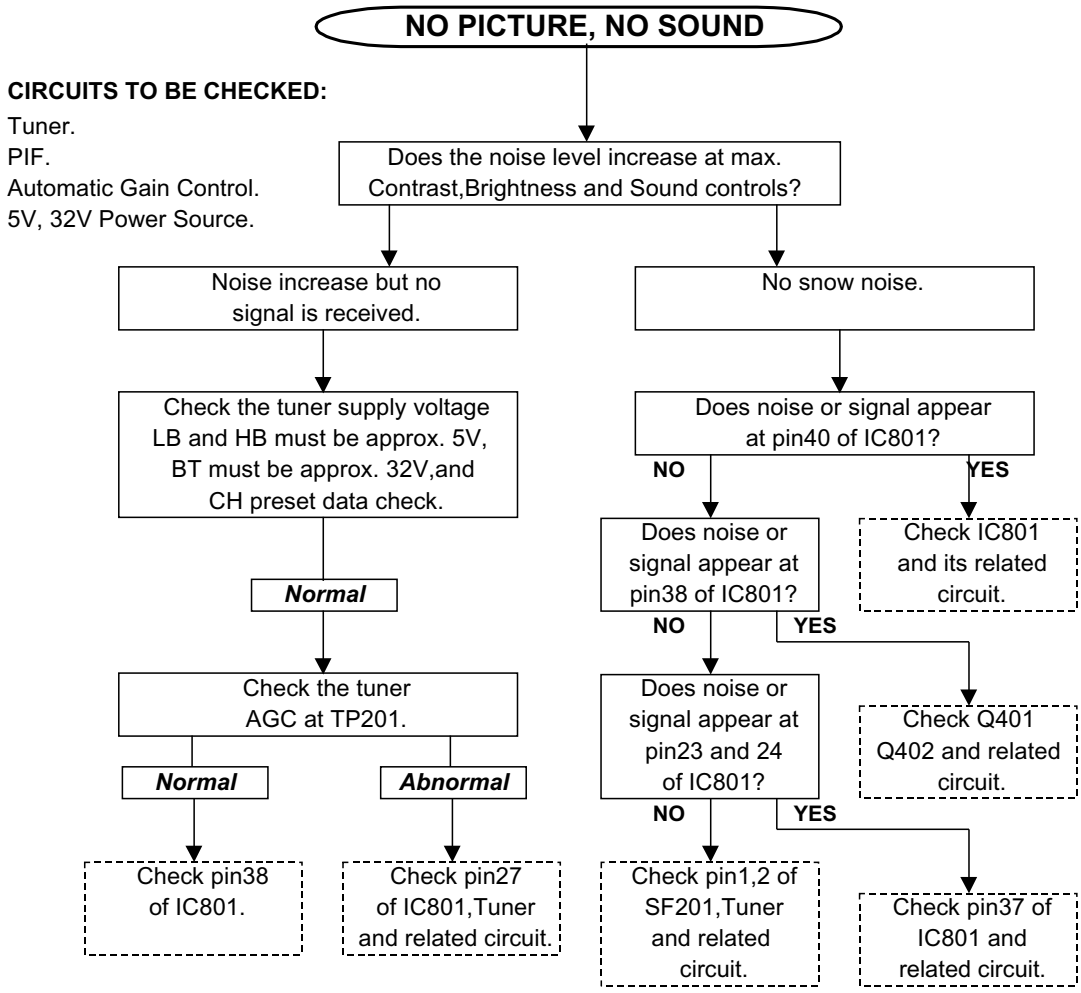
The picture colour is magenta.

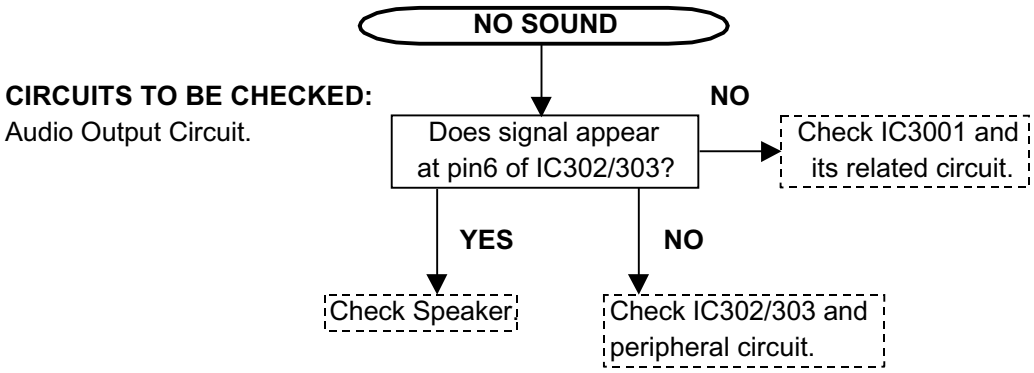
Check Q871,Q883 and their adjacent circuits.

The picture colour is yellow.

Check Q872,Q887 and their adjacent circuits.

# TROUBLESHOOTING TABLES


NO PICTURE, NO SOUND
CIRCUITS TO BE CHECKED:
Tuner.
PIF.
Automatic Gain Control.
5V, 32V Power Source.
Does the noise level increase at max. Contrast,Brightness and Sound controls?
Noise increase but no signal is received.
No snow noise.
Check the tuner supply voltage LB and HB must be approx. 5V, BT must be approx. 32V,and CH preset data check.
Does noise or signal appear at pin40 of IC801?
NO
YES
Normal
Does noise or signal appear at pin38 of IC801?
Check IC801 and its related circuit.
NO
YES
Check the tuner AGC at TP201.
Does noise or signal appear at pin23 and 24 of IC801?
Check Q401 Q402 and related circuit.
Normal
Abnormal
NO
YES
Check pin38 of IC801.
Check pin27 of IC801,Tuner and related circuit.
Check pin1,2 of SF201,Tuner and related circuit.
Check pin37 of IC801 and related circuit.



# PARTS LISTING

## REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by ⚠ in the Replacement Part List.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

### HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

MARK *: SPARE PARTS DELIVERY SECTION

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | | | **PICTURE TUBE** | | | |
| ⚠ | | RCILG0408BMZZ | DEGUSSING COIL | S | AH | AP |
| ⚠ | | VB51EAL15511N | CRT 21" PHILIPS B/MATRIX | S | CF | CG |
| | **PRINTED WIRING BOARD (Not replacement item)** | | | | | |
| | PWB-A | DUNTK7340CJW3 | ADJUST CHASSIS 21HS50C | S | | |
| | PWB-B | DUNTK7341BMV8 | CRT UNIT 21HS50N | S | AH | AV |
| | **PWB-A** | | **MOTHER UNIT** | | | |
| | | | **TUNER** | | | |
| | TU 0201 | VTUCTF5511+++ | TUNER THOMSON | S | AN | AZ |
| | | | **INTEGRATED CIRCUITS** | | | |
| | IC 0303 | VHIAN7523++-1 | IC AN7523 MATSUSHITA | S | AC | AH |
| | IC 0501 | VHIAN5522++-1 | IC AN5523 MATSUSHITA | S | AC | AG |
| | IC 0601 | VHIKA7808AP-1 | IC KIA7808API KOREA ELECTRONICS | S | AA | AE |
| | IC 0701 | VHITEA1507/-1 | IC TEA1507P/N1 PHILIPS | S | AC | AH |
| ⚠ | IC 0702 | RH-FX0008GEZZ | P/COUPLER RANK-S SHARP | S | AA | AD |
| | IC 0751 | VHITA48M033-1 | IC TA48M033F(S) TOSHIBA | S | AB | AF |
| | IC 0801 | RH-IXA097WJN2 | IC TDA9351PS/N2/3/0714 PHILIPS | S | AV | BG |
| | IC 1002 | VHIM24C08W6-1 | IC M24C08-WMN6T ST MICRO | S | AB | AF |
| | IC 3001 | VHIMSP3415G-1 | IC MSP3415G | S | AR | BC |
| | | | **TRANSISTORS** | | | |
| | Q 0331 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0351 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0352 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0401 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0402 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0451 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0501 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0502 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0601 | VS2SC2482//-1 | TRT 2SC2482 TOSHIBA | S | AA | AC |
| | Q 0602 | VS2SD2586//1E | TRT 2SD2586 TOSHIBA | S | AC | AK |
| | Q 0603 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0604 | VS2SC4793//-1 | TRT C4793 TOSHIBA | S | AB | AE |
| | Q 0605 | VS2SA1530ARS1 | smt transistor | S | AA | AA |
| | Q 0631 | VS2SA1530ARS1 | smt transistor | S | AA | AA |
| | Q 0701 | VSSTP4NC80Z1E | MOS FET STP4NC80ZFP TOMEN | S | AC | AH |
| | Q 0752 | VS2SC1815GW-1 | TRT NPN 60V 150MA 400MW | S | AA | AA |
| | Q 0753 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 0754 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 1005 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | Q 1006 | VS2SC3928AR-1 | TRANSISTOR | S | AA | AA |
| | | | **DIODES** | | | |
| | D 0201 | RH-EX0676GEZZ | ZENER DIODE MTZJ33CT ROHM | S | AA | AA |
| | D 0303 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0351 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0451 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0452 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0453 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0454 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0456 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0457 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0501 | RH-DX0131CEZZ | DIODE EU-1 SANKEN | S | AA | AB |
| | D 0502 | RH-DX0441CEZZ | DIODE IN4002G23 GENERAL INSTRUMENT | S | AA | AB |
| | D 0503 | RH-EX0684GEZZ | ZENER DIODE MTZJ39BT ROHM | S | AA | AA |
| | D 0504 | RH-EX0684GEZZ | ZENER DIODE MTZJ39BT ROHM | S | AA | AA |
| | D 0505 | RH-DX0131CEZZ | DIODE EU-1 SANKEN | S | AA | AB |
| | D 0507 | RH-EX0603GEZZ | Z.DIODE MTZJ 3.9A | S | AA | AA |
| | D 0508 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0509 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0510 | RH-EX0627GEZZ | ZENER DIODE MTZJ8.2BT ROHM | S | AA | AA |
| | D 0601 | RH-DX0302CEZZ | DIODE UZA | S | AA | AB |
| | D 0602 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0603 | RH-DX0131CEZZ | DIODE EU-1 SANKEN | S | AA | AB |
| | D 0604 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0605 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0606 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0607 | RH-EX0653GEZZ | DIODE ZENER MTZJ18C ROHM | S | AA | AA |
| | D 0608 | RH-DX0577BMZZ | DIODE 1N4935 ACPA | S | AB | AE |
| | D 0609 | VHD1SS244//-1 | SW DIODE 1SS244T-72 | S | AA | AA |
| | D 0610 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0611 | RH-EX0615GEZZ | ZENER DIODE 5.6V | S | AA | AA |
| | D 0612 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0614 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0615 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0631 | RH-EX0627GEZZ | ZENER DIODE MTZJ8.2BT ROHM | S | AA | AA |
| | D 0632 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0701 | RH-DX0571BMZZ | DIODE 1N4005 ACPA | S | AA | AA |
| | D 0702 | RH-DX0571BMZZ | DIODE 1N4005 ACPA | S | AA | AA |
| | D 0703 | RH-DX0571BMZZ | DIODE 1N4005 ACPA | S | AA | AA |
| | D 0704 | RH-DX0571BMZZ | DIODE 1N4005 ACPA | S | AA | AA |
| | D 0705 | VHD1SS244//-1 | SW DIODE 1SS244T-72 | S | AA | AA |
| | D 0708 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0709 | RH-EX0656GEZZ | ZENER DIODE MTZJ20C ROHM | S | AA | AA |
| | D 0751 | RH-DX0302CEZZ | DIODE UZA | S | AA | AB |
| | D 0752 | RH-DX0064GEZZ | DIODE AK04V1 SANKEN | S | AA | AC |
| | D 0753 | RH-EX0612GEZZ | ZENER DIODE MTZJ5.1BT ROHM | S | AA | AA |
| | D 0755 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0756 | RH-EX0615GEZZ | ZENER DIODE 5.6V | S | AA | AA |
| | D 0758 | RH-DX0468CEZZ | DIODE S3L20U SHINDENGEN | S | AA | AD |
| | D 0759 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0804 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0805 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0806 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 0807 | RH-EX1399CEZZ | ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC | S | AA | AB |
| | D 1001 | RH-PX0013PEZZ | LED L-53ID-13.95L/F | S | AA | AB |
| | | | **PACKAGED CIRCUITS** | | | |
| | PR 0701 | RMPTP0001BMZZ | PTC B59250-C1080-B70 | S | AA | AD |
| | X 1001 | RCRSB0300CEZZ | CRYSTAL HC-49/U-S 12000KHz-A1 MURATA | S | AB | AF |
| | X 3001 | RCRSB0249GEZZ | X'TAL 18.432MHZ | S | AA | AE |
| | | | **COILS** | | | |
| | L 0201 | VP-DF270K0000 | PEAK COIL 27UH 10% | S | AA | AB |
| | L 0204 | VP-DF270K0000 | PEAK COIL 27UH 10% | S | AA | AB |
| | L 0308 | VP-CF3R3K0000 | PEAK COIL 3.3UH 10% | S | AB | AB |
| | L 0351 | VP-DF3R3K0000 | PEAK COIL 3,3UH 10% | S | AB | AB |
| | L 0352 | VP-DF3R3K0000 | PEAK COIL 3,3UH 10% | S | AB | AB |
| | L 0353 | VP-DF3R3K0000 | PEAK COIL 3,3UH 10% | S | AB | AB |
| | L 0354 | VP-DF3R3K0000 | PEAK COIL 3,3UH 10% | S | AB | AB |
| | L 0403 | VP-XF120K0000 | PEAK COIL 12UH 10% 1/8W | S | AA | AA |
| | L 0451 | VP-DF3R3K0000 | PEAK COIL 3,3UH 10% | S | AB | AB |
| | L 0602 | RCILP0225CEZZ | COIL SL_A TOKYO | S | AA | AD |
| | L 0701 | RCILF0111BMZZ | COIL HR-19043 | S | AE | AL |
| | L 0801 | VP-XF100K0000 | PEAK COIL 10UH 10% 1/8W | S | AA | AA |
| | L 0802 | VP-XF100K0000 | PEAK COIL 10UH 10% 1/8W | S | AA | AA |
| | L 1002 | VP-XF100K0000 | PEAK COIL 10UH 10% 1/8W | S | AA | AA |
| | L 3001 | VP-DF100K0000 | PEAK COIL 10UH 10% | S | AA | AA |
| | L 3002 | VP-DF100K0000 | PEAK COIL 10UH 10% | S | AA | AA |
| | L 3003 | VP-DF100K0000 | PEAK COIL 10UH 10% | S | AA | AA |
| | L 3030 | VP-CF3R3K0000 | PEAK COIL 3.3UH 10% | S | AB | AB |
| | L 3050 | VP-CF3R3K0000 | PEAK COIL 3.3UH 10% | S | AB | AB |
| | L 3060 | VP-CF3R3K0000 | PEAK COIL 3.3UH 10% | S | AB | AB |
| | | | **CERAMIC FILTERS** | | | |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | CF 0401 | RFILC0168GEZZ | SIF TRAP 5.5/6.5MHZ (MRT) | S | AA | AE |
| | SF 0201 | RFILC0291BMZZ | SAW FILTER K2955M SIEMENS | S | AH | AP |
| | | | **TRANSFORMERS** | | | |
| | T 0601 | RTRNZ0026PEZZ | DRIVER TRANSFORMER | S | AB | AF |
| ⚠ | T 0602 | RTRNF2053CEZZ | FBT BSC21-2643S SHENZHEN | S | AM | AY |
| ⚠ | T 0701 | RTRNW0005CEZZ | SMT TABUCHI | S | AE | AP |
| | | | **CAPACITORS** | | | |
| | C 0201 | VCEA0A1CW476M | ELEC C 47UF 20% 16V | S | AA | AA |
| | C 0202 | VCEA0A1AW107M | ELEC C 100UF 20% 10V | S | AA | AA |
| | C 0204 | VCEA0A1HW106M | ELEC C 10UF 20% 50V | S | AA | AA |
| | C 0206 | VCKYCY1HF223Z | SC CAPACITOR 0.022UF 50V TAPED | S | AA | AA |
| | C 0207 | VCKYCY1HB472K | S.CHIP CAP 4700PF/50V T | S | AA | AA |
| | C 0208 | VCKYCY1HB821K | GRM39B 821K 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 0209 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 0210 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 0211 | VCKYPA1HF103Z | C.CAPACITOR 0.01U-F 50V | S | AA | AA |
| | C 0212 | VCKYPA1HF103Z | C.CAPACITOR 0.01U-F 50V | S | AA | AA |
| | C 0215 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 0302 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0305 | VCEA0A1EW337M | ELEC C 330UF 20% 25V | S | AA | AB |
| | C 0307 | VCEA0A1CW226M | ELEC C 22UF 20% 16V | S | AA | AA |
| | C 0308 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0311 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0314 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0318 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0322 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0323 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0324 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0327 | VCCCCY1HH221J | S. CHIP CAP 220PF/50V TAPED | S | AA | AA |
| | C 0328 | VCCCCY1HH221J | S. CHIP CAP 220PF/50V TAPED | S | AA | AA |
| | C 0331 | VCEA0A1HW225M | ELEC C 2,2UF 20% 50V | S | AA | AA |
| | C 0341 | VCKYCY1HB332K | s.chip cap 3300pf /50v | S | AA | AA |
| | C 0342 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0344 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0349 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0351 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0352 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0354 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0356 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0357 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0358 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0359 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0360 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0361 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0362 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0363 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0370 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0402 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 0403 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0404 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0431 | VCKYCY1HF223Z | SC CAPACITOR 0.022UF 50V TAPED | S | AA | AA |
| | C 0432 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0433 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 0451 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0453 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0502 | VCEA0A1EW477M | ELEC C 470UF 20% 25V | S | AA | AB |
| | C 0504 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0505 | VCEA0A1HW107M | ELEC C 100UF 20% 50V | S | AA | AA |
| | C 0506 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0507 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0508 | RC-FZ0272CEZZ | C POL P 0,39UF 100V | S | AA | AC |
| | C 0509 | VCQYTA2AA563J | POL FILM C 56NF 5% 100V | S | AA | AB |
| | C 0511 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0512 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0513 | VCKYPA2HB102K | CERAM C 1NF 10% 500V | S | AA | AA |
| | C 0514 | VCEA0A1EW477M | ELEC C 470UF 20% 25V | S | AA | AB |
| | C 0515 | VCQYTA1HM103J | F. CAPACITOR 0.01UF/50V | S | AA | AA |
| | C 0521 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0522 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0531 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0532 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0533 | VCQYTA1HM104J | F. CAPACITOR 0.1 UF 50 V | S | AA | AA |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | C 0599 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0602 | VCEA0A1CW477M | ELEC C 470UF 20% 16V | S | AA | AA |
| | C 0603 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0604 | VCKYPA1HF103Z | C.CAPACITOR 0.01U-F 50V | S | AA | AA |
| | C 0605 | VCEA0A1AW227M | ELEC C 220UF 20% 10V | S | AA | AA |
| | C 0606 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0607 | VCKYPA1HF103Z | C.CAPACITOR 0.01U-F 50V | S | AA | AA |
| | C 0608 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 0609 | VCKYPA2HB102K | CERAM C 1NF 10% 500V | S | AA | AA |
| | C 0610 | VCFYSB2EB823J | POL FILM C 82NF 5% 100V | S | AA | AB |
| | C 0611 | VCFPVC3CA912H | PP FILM C 9,1NF 3% 1600V | S | AA | AC |
| | C 0612 | RC-KZ0036CEZZ | CERAM C 330PF 2KV | S | AA | AB |
| | C 0613 | VCFPVC2DB564J | PP FILM C 560NF 5% 200V | S | AA | AD |
| | C 0614 | VCFPVC2DB564J | PP FILM C 560NF 5% 200V | S | AA | AD |
| | C 0615 | RC-EZ0724CEZZ | ELEC C 100UF 160V KMF160VB-100MMC NICHIC | S | AB | AE |
| | C 0616 | VCQYTA1HM104J | F. CAPACITOR 0.1 UF 50 V | S | AA | AA |
| | C 0617 | VCEA0A1HW105M | ELEC C 1UF 20% 50V | S | AA | AA |
| | C 0619 | VCEA0A1HW106M | ELEC C 10UF 20% 50V | S | AA | AA |
| | C 0621 | VCEA0A2CW105M | ELEC C 1UF 20% 160V | S | AA | AA |
| | C 0622 | VCEA0A1CW227M | E CAPACITOR 220UF 16V 6.3x11 | S | AA | AA |
| | C 0631 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 0632 | VCKYCY1HB222K | S CHIP CAPACITOR 0.0022UF/50V TAPED | S | AA | AA |
| | C 0633 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| ⚠ | C 0701 | RC-FZ0176BMZZ | POL C B81130 100NF 275V X2 | S | AA | AB |
| | C 0702 | RC-KZ0029CEZZ | CERAM C 10NF 80,20% 250V | S | AC | AC |
| | C 0703 | RC-KZ0029CEZZ | CERAM C 10NF 80,20% 250V | S | AC | AC |
| | C 0704 | RC-KZ0029CEZZ | CERAM C 10NF 80,20% 250V | S | AC | AC |
| | C 0705 | RC-EZ0150BMZZ | ELEC C 100uF 400V LPN100M2GN JAMICON | S | AD | AM |
| | C 0707 | VCEA0A1EW107M | E. CAPACITOR 100UF 25V 6.3x11 | S | AA | AA |
| | C 0708 | VCQYTA1HM104J | F. CAPACITOR 0.1 UF 50 V | S | AA | AA |
| | C 0709 | VCFYFA1HA474J | FILM CAPACITOR 474 MAT | S | AA | AB |
| | C 0710 | RC-KZ0040CEZZ | CERAM C 820PF 2KV | S | AD | AD |
| ⚠ | C 0712 | RC-KZ0105GEZZ | C. CAP 2200PF/4KV-KX | S | AA | AB |
| | C 0713 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0716 | VCKYPA2HB102K | CERAM C 1NF 10% 500V | S | AA | AA |
| | C 0751 | RC-KZ0299CEZZ | CERAM C DE1105-979BN821K2K-A3 MURATA | S | AA | AB |
| | C 0752 | RC-EZ0724CEZZ | ELEC C 100UF 160V KMF160VB-100MMC NICHIC | S | AB | AE |
| | C 0753 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0754 | VCEA0A1CW108M | ELEC C 1000MF 16V 10X16MM | S | AA | AB |
| | C 0755 | VCEA0A1CW227M | E CAPACITOR 220UF 16V 6.3x11 | S | AA | AA |
| | C 0756 | VCEA0A0JW227M | E CAPACITOR 220UF/6.3V-5X11 | S | AA | AA |
| | C 0757 | VCKYPA2HB102K | CERAM C 1NF 10% 500V | S | AA | AA |
| | C 0758 | VCEA0A1EW108M | ELEC C 1000UF 20% 25V | S | AA | AC |
| | C 0759 | VCKYPA1HB102K | C.CAPACITOR 1000PF/50V | S | AA | AA |
| | C 0761 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 0762 | VCCCPA1HH680J | CERAM C 68PF 5% 50V | S | AA | AA |
| | C 0764 | VCEA0A1EW107M | E. CAPACITOR 100UF 25V 6.3x11 | S | AA | AA |
| | C 0765 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 0767 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0801 | VCEA0A1CW227M | E CAPACITOR 220UF 16V 6.3x11 | S | AA | AA |
| | C 0803 | VCFYFA1HA224J | PP FILM C 220NF 5% 50V | S | AA | AA |
| | C 0804 | VCFYFA1HA224J | PP FILM C 220NF 5% 50V | S | AA | AA |
| | C 0805 | VCKYCY1HB222K | S CHIP CAPACITOR 0.0022UF/50V TAPED | S | AA | AA |
| | C 0806 | VCEA0A1HW105M | ELEC C 1UF 20% 50V | S | AA | AA |
| | C 0807 | VCKYCY1HB472K | S.CHIP CAP 4700PF/50V T | S | AA | AA |
| | C 0808 | VCKYCY1HF223Z | SC CAPACITOR 0.022UF 50V TAPED | S | AA | AA |
| | C 0809 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 0810 | VCEA0A1HW474M | ELEC C 0,47UF 20% 50V | S | AA | AA |
| | C 0811 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0812 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0813 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 0814 | VCKYCY1HB561K | S. CAPACITOR 560PF/50V | S | AA | AA |
| | C 0815 | VCEA0A1CW227M | E CAPACITOR 220UF 16V 6.3x11 | S | AA | AA |
| | C 0817 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0818 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0819 | VCEA0A1CW227M | E CAPACITOR 220UF 16V 6.3x11 | S | AA | AA |
| | C 0822 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 0823 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 1001 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 1002 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 1006 | VCKYCY1HF223Z | SC CAPACITOR 0.022UF 50V TAPED | S | AA | AA |
| | C 1009 | VCEA0A0JW107M | ELEC C 100UF 20% 6,3V | S | AA | AA |
| | C 1011 | VCEA0A0JW107M | ELEC C 100UF 20% 6,3V | S | AA | AA |
| | C 1012 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | C 1013 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 1014 | VCEA0A0JW107M | ELEC C 100UF 20% 6,3V | S | AA | AA |
| | C 1015 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 1016 | VCEA0A1CW476M | ELEC C 47UF 20% 16V | S | AA | AA |
| | C 1017 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 1018 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 3001 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 3003 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 3004 | VCCCCY1HH471J | GRM39CK 471J 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 3005 | VCEA0A1CW107M | ELEC C 100UF 20% 16V | S | AA | AA |
| | C 3006 | VCEA0A1HW335M | ELEC C 3,3UF 20% 50V | S | AA | AA |
| | C 3007 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 3008 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3011 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3012 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3013 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3014 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3015 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 3016 | VCCCCY1HH220J | S. CHIP CAP 22PF/50V TAPED | S | AA | AA |
| | C 3017 | VCCCCY1HH560J | S. CHIP CAP 56PF/50V TAPE | S | AA | AA |
| | C 3018 | VCCCCY1HH560J | S. CHIP CAP 56PF/50V TAPE | S | AA | AA |
| | C 3019 | VCCCCY1HH1R5C | GRM39CK 1R5C 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 3020 | VCCCCY1HH1R5C | GRM39CK 1R5C 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 3021 | VCKYCY1EF104Z | S CHIP TAPE CAP 0.1UF/25V | S | AA | AA |
| | C 3022 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 3023 | VCCCCY1HH471J | GRM39CK 471J 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 3024 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 3025 | VCKYCY1HB102K | S. CHIP CAP 0.001UF/50V | S | AA | AA |
| | C 3026 | VCEA0A1HW105M | ELEC C 1UF 20% 50V | S | AA | AA |
| | C 3027 | VCEA0A1HW105M | ELEC C 1UF 20% 50V | S | AA | AA |
| | C 3028 | VCKYCY1HF103Z | CHIP CAP 0.01UF/50V | S | AA | AA |
| | C 3029 | VCEA0A1CW106M | ELEC C 10UF 20% 16V | S | AA | AA |
| | C 3030 | VCCCCY1HH151J | GRM39CK 151J 50 (1608)SMD CAPACITOR | S | AA | AA |
| | C 3031 | VCCCCY1HH470J | S. CHIP CAP 47PF/50V (TAPED) | S | AA | AA |
| | | | **RESISTORS** | | | |
| | R 0201 | VRD-RA2BE332J | RES 3,3KOHM 5% 1/8W | S | AA | AA |
| | R 0202 | VRS-CY1JF681J | S. CHIP RES. 680-OHM TAPED | S | AA | AA |
| | R 0208 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0209 | VRS-CY1JF391J | SURFACE MOUNT CHIP RESISTOR 390 OHM | S | AA | AA |
| | R 0302 | VRS-CY1JF472J | S. RES. 4.7K OHM TAPED | S | AA | AA |
| | R 0303 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0305 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0306 | VRS-CY1JF392J | S. CHIP RES. 3.9K-OHM TAPED | S | AA | AA |
| | R 0331 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0332 | VRS-CY1JF473J | S. CHIP RES 47K-OHM TAPED | S | AA | AA |
| | R 0333 | VRD-RA2BE103J | RES 10KOHM 5% 1/8W | S | AA | AA |
| | R 0341 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0351 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 0352 | VRS-CY1JF104J | S. CHIP RES. 100K-OHM TAPED | S | AA | AA |
| | R 0354 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 0355 | VRS-CY1JF104J | S. CHIP RES. 100K-OHM TAPED | S | AA | AA |
| | R 0356 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0357 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0359 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0360 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0362 | VRS-CY1JF472J | S. RES. 4.7K OHM TAPED | S | AA | AA |
| | R 0363 | VRS-CY1JF104J | S. CHIP RES. 100K-OHM TAPED | S | AA | AA |
| | R 0364 | VRS-CY1JF472J | S. RES. 4.7K OHM TAPED | S | AA | AA |
| | R 0365 | VRS-CY1JF104J | S. CHIP RES. 100K-OHM TAPED | S | AA | AA |
| | R 0366 | VRS-CY1JF561J | S. CHIP RES 560-OHM TAPED | S | AA | AA |
| | R 0367 | VRS-CY1JF561J | S. CHIP RES 560-OHM TAPED | S | AA | AA |
| | R 0401 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0403 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0404 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0405 | VRS-CY1JF181J | S CHIP RES. 180-OHM TAPED | S | AA | AA |
| | R 0406 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0407 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0408 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0409 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0451 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0452 | VRS-CY1JF104J | S. CHIP RES. 100K-OHM TAPED | S | AA | AA |
| | R 0453 | VRS-CY1JF223J | S.CHOP REG 22K-OHM T | S | AA | AA |
| | R 0454 | VRS-CY1JF562J | S. CHIP RES. 5.6K-OHM TAPED | S | AA | AA |

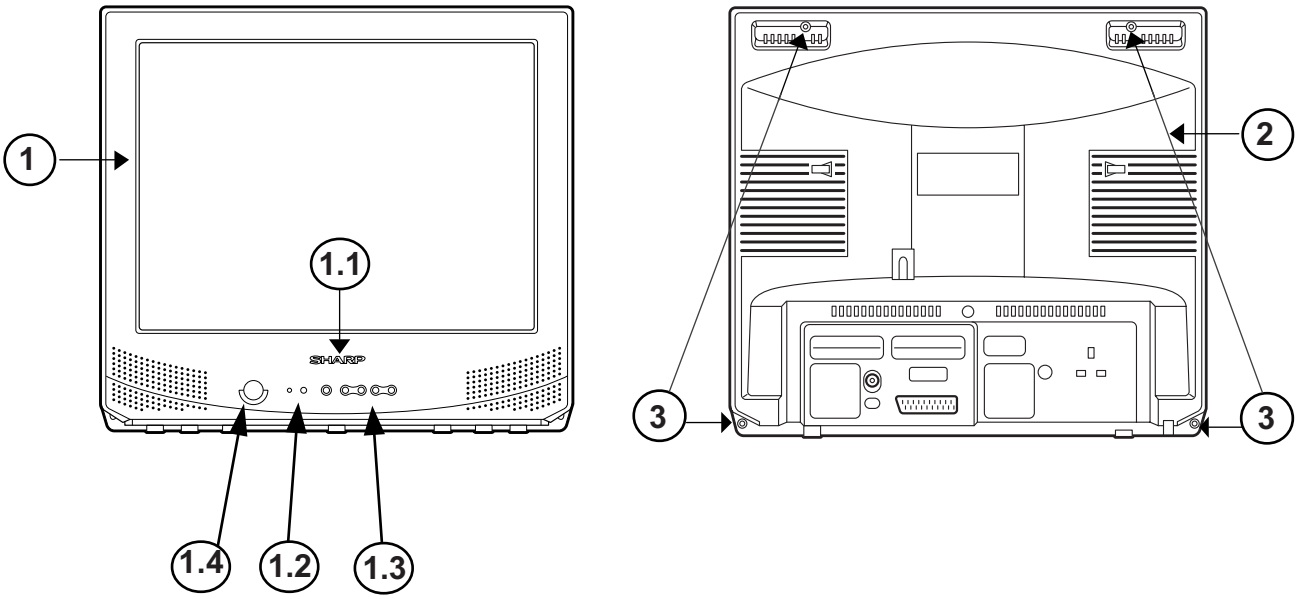
| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | R 0455 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0456 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0457 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0458 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0459 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0460 | VRD-RA2EE750J | RES 75 OHM 5% 1/4W | S | AA | AA |
| | R 0461 | VRD-RA2BE224J | RES 220KOHM 5% 1/8W | S | AA | AA |
| | R 0490 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 0491 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 0501 | VRD-RA2BE392J | RES 3,9KOHM 5% 1/8W | S | AA | AA |
| | R 0502 | VRN-VV3DB2R7J | MET FILM R 2,7 OHM 5% 2W | S | AA | AB |
| | R 0503 | VRD-RA2HD331J | RES 330 OHM 5% 1/2W | S | AA | AA |
| | R 0504 | VRS-CY1JF181J | S CHIP RES. 180-OHM TAPED | S | AA | AA |
| | R 0505 | VRD-RA2BE1R0J | RES 1 OHM 5% 1/8W | S | AA | AA |
| | R 0507 | VRS-CY1JF181J | S CHIP RES. 180-OHM TAPED | S | AA | AA |
| | R 0509 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0511 | VRD-RA2HD102J | RES 1KOHM 5% 1/2W | S | AA | AA |
| | R 0512 | VRD-RA2BE100J | RES 10 OHM 5% 1/8W | S | AA | AA |
| | R 0513 | VRD-RA2BE103J | RES 10KOHM 5% 1/8W | S | AA | AA |
| | R 0514 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0515 | VRS-CY1JF153J | S CHIP RES. 15K-OHM TAPED | S | AA | AA |
| | R 0516 | VRS-CY1JF153J | S CHIP RES. 15K-OHM TAPED | S | AA | AA |
| | R 0517 | VRS-CY1JF223J | S.CHOP REG 22K-OHM T | S | AA | AA |
| | R 0518 | VRS-CY1JF334J | S. CHIP RES. 330K-OHM TAPED | S | AA | AA |
| | R 0531 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0532 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0533 | VRD-RA2BE393J | RES 39KOHM 5% 1/8W | S | AA | AA |
| | R 0603 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0604 | VRD-RA2HD472J | RES 4.7KOHM 5% 1/2W | S | AA | AA |
| | R 0605 | VRS-KT3LB332J | MET OX RES 3,3KOHM 5% 3W | S | AA | AD |
| | R 0606 | VRD-RA2HD102J | RES 1KOHM 5% 1/2W | S | AA | AA |
| | R 0607 | VRD-RA2BE104J | RES 100KOHM 5% 1/8W | S | AA | AA |
| | R 0608 | VRN-RV3AB2R2J | MET FILM R 2,2 OHM 5% 1W | S | AA | AB |
| | R 0609 | VRD-RA2HD101J | RES 100 OHM 5% 1/2W | S | AA | AA |
| | R 0610 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0611 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0612 | VRD-RA2BE331J | RES 330 OHM 5% 1/8W | S | AA | AA |
| | R 0613 | VRD-RA2HD184J | RES 180KOHM 5% 1/2W | S | AA | AA |
| | R 0614 | VRD-RA2HD472J | RES 4.7KOHM 5% 1/2W | S | AA | AA |
| | R 0615 | VRD-RA2HD472J | RES 4.7KOHM 5% 1/2W | S | AA | AA |
| | R 0616 | VRD-RA2HD182J | RES 1,8KOHM 5% 1/2W | S | AA | AA |
| | R 0618 | VRD-RA2BE123J | RES 12KOHM 5% 1/8W | S | AA | AA |
| | R 0619 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 0620 | VRD-RA2HD100J | RES 10 OHM 5% 1/2W | S | AA | AA |
| | R 0621 | VRD-RA2HD820J | RES 82 OHM 5% 1/2W | S | AA | AA |
| ⚠ | R 0623 | VRG-RL2HB562J | FUS RES 5,6KOHM 5% 1/2W | S | AA | AB |
| | R 0624 | VRD-RA2BE123J | RES 12KOHM 5% 1/8W | S | AA | AA |
| | R 0625 | VRD-RA2BE103J | RES 10KOHM 5% 1/8W | S | AA | AA |
| | R 0626 | VRS-CY1JF562J | S. CHIP RES. 5.6K-OHM TAPED | S | AA | AA |
| | R 0627 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 0629 | VRD-RA2EE151J | RES 150 OHM 5% 1/4W | S | AA | AA |
| | R 0630 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0631 | VRD-RA2BE391J | RES 390 OHM 5% 1/8W | S | AA | AA |
| | R 0632 | VRD-RA2BE273J | RES 27KOHM 5% 1/8W | S | AA | AA |
| | R 0633 | VRS-CY1JF822J | S. CHIP RES. 8.2K-OHM TAPED | S | AA | AA |
| | R 0634 | VRS-CY1JF102J | S.CHIP RES TAPE 1K OHM | S | AA | AA |
| | R 0636 | VRS-CY1JF154J | S CHIP RES. 150K-OHM TAPED | S | AA | AA |
| | R 0637 | VRS-CY1JF333J | S. CHIP RES. 33K-OHM TAPED | S | AA | AA |
| | R 0638 | VRS-CY1JF221J | S. CHIP RES. 220-OHM TAPED | S | AA | AA |
| | R 0639 | VRD-RA2BE333J | RES 33KOHM 5% 1/8W | S | AA | AA |
| | R 0640 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 0701 | VRW-KP3HC5R6K | WOUND RES 5,6 OHM 10% 5W | S | AB | AC |
| | R 0706 | VRD-RA2BE122J | RES 1,2KOHM 5% 1/8W | S | AA | AA |
| | R 0707 | VRD-RA2BE393J | RES 39KOHM 5% 1/8W | S | AA | AA |
| | R 0708 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0710 | VRN-VV3ABR27J | MET FILM R .27 OHM 5% 1W | S | AA | AA |
| | R 0711 | VRD-RA2BE270J | RES 27 OHM 5% 1/8W | S | AA | AA |
| | R 0712 | VRD-RA2HD100J | RES 10 OHM 5% 1/2W | S | AA | AA |
| | R 0713 | VRD-RA2BE394J | RES 390KOHM 5% 1/8W | S | AA | AA |
| ⚠ | R 0715 | VRC-UA2HG825K | SOLID R 8,2MOHM 10% 1/2W | S | AA | AA |
| ⚠ | R 0716 | VRC-UA2HG825K | SOLID R 8,2MOHM 10% 1/2W | S | AA | AA |
| | R 0718 | VRD-RA2BE824J | RES 820KOHM 5% 1/8W | S | AA | AA |
| | R 0752 | VRD-RA2HD102J | RES 1KOHM 5% 1/2W | S | AA | AA |
| | R 0753 | VRN-VV3DB5R6J | MET FILM R 5.6 OHM 5% 2W | S | AA | AA |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | R 0758 | VRN-VV3DB5R6J | MET FILM R 5.6 OHM 5% 2W | S | AA | AA |
| | R 0761 | VRD-RA2BE152J | RES 1,5KOHM 5% 1/8W | S | AA | AA |
| | R 0762 | VRD-RA2HD184J | RES 180KOHM 5% 1/2W | S | AA | AA |
| | R 0763 | VRD-RA2BE822J | RES 8,2KOHM 5% 1/8W | S | AA | AA |
| | R 0766 | VRD-RA2EE183J | RES 18KOHM 5% 1/4W | S | AA | AA |
| | R 0768 | VRD-RA2HD124J | RES 120KOHM 5% 1/2W | S | AA | AA |
| | R 0770 | VRD-RA2HD181J | RES 180 OHM 5% 1/2W | S | AA | AA |
| | R 0771 | VRD-RA2HD181J | RES 180 OHM 5% 1/2W | S | AA | AA |
| | R 0772 | VRS-CY1JF333J | S. CHIP RES. 33K-OHM TAPED | S | AA | AA |
| | R 0773 | VRS-CY1JF153J | S CHIP RES. 15K-OHM TAPED | S | AA | AA |
| | R 0774 | VRS-CY1JF332J | S. CHIP RES. 3.3K-OHM TAPED | S | AA | AA |
| | R 0801 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0802 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0803 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0804 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0805 | VRS-CY1JF223J | S.CHOP REG 22K-OHM T | S | AA | AA |
| | R 0806 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0807 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0808 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 0809 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1001 | VRS-CY1JF181J | S CHIP RES. 180-OHM TAPED | S | AA | AA |
| | R 1002 | VRS-CY1JF221J | S. CHIP RES. 220-OHM TAPED | S | AA | AA |
| | R 1003 | VRS-CY1JF331J | S CHIP RES TAPE 330 OHM | S | AA | AA |
| | R 1004 | VRS-CY1JF681J | S. CHIP RES. 680-OHM TAPED | S | AA | AA |
| | R 1005 | VRS-CY1JF472J | S. RES. 4.7K OHM TAPED | S | AA | AA |
| | R 1006 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1008 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1009 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1014 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 1015 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 1016 | VRD-RA2BE332J | RES 3,3KOHM 5% 1/8W | S | AA | AA |
| | R 1017 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 1018 | VRD-RA2BE332J | RES 3,3KOHM 5% 1/8W | S | AA | AA |
| | R 1019 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1020 | VRS-CY1JF153J | S CHIP RES. 15K-OHM TAPED | S | AA | AA |
| | R 1022 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1023 | VRD-RA2BE153J | RES 15KOHM 5% 1/8W | S | AA | AA |
| | R 1024 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1025 | VRS-CY1JF122J | S. RESISTOR 1.2K OHM | S | AA | AA |
| | R 1026 | VRS-CY1JF224J | S. CHIP RES. 220K-OHM TAPED | S | AA | AA |
| | R 1027 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1028 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 1029 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1033 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1034 | VRD-RA2BE332J | RES 3,3KOHM 5% 1/8W | S | AA | AA |
| | R 1035 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1036 | VRD-RA2BE332J | RES 3,3KOHM 5% 1/8W | S | AA | AA |
| | R 1037 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 1038 | VRS-CY1JF223J | S.CHOP REG 22K-OHM T | S | AA | AA |
| | R 1040 | VRS-CY1JF152J | S. CHIP RES. 1.5K-OHM | S | AA | AA |
| | R 1041 | VRS-CY1JF152J | S. CHIP RES. 1.5K-OHM | S | AA | AA |
| | R 1042 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1043 | VRS-CY1JF562J | S. CHIP RES. 5.6K-OHM TAPED | S | AA | AA |
| | R 1044 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1047 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1048 | VRS-CY1JF391J | SURFACE MOUNT CHIP RESISTOR 390 OHM | S | AA | AA |
| | R 1052 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1053 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | R 1054 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 1056 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 1057 | VRS-CY1JF472J | S. RES. 4.7K OHM TAPED | S | AA | AA |
| | R 1058 | VRS-CY1JF101J | S. CHIP RES. 100-OHM TAPED | S | AA | AA |
| | R 3001 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 3002 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 3003 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 3004 | VRD-RA2BE101J | RES 100 OHM 5% 1/8W | S | AA | AA |
| | R 3008 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 3009 | VRS-CY1JF333J | S. CHIP RES. 33K-OHM TAPED | S | AA | AA |
| | R 3010 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | R 3011 | VRS-CY1JF333J | S. CHIP RES. 33K-OHM TAPED | S | AA | AA |
| | R 3012 | VRS-CY1JF103J | S.C. RESISTOR 10K OHM | S | AA | AA |
| | RJ 0001 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0002 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0004 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | RJ 0008 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0009 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0010 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0011 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0012 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0019 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0020 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0024 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0025 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0026 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0027 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0029 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0031 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0033 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0035 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0036 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0044 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0046 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0047 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0048 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0055 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0056 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0057 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0058 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0059 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0061 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0062 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0064 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0065 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0067 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0068 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0070 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0072 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0075 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0077 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0078 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0080 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0081 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0082 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | RJ 0085 | VRS-CY1JF000J | S. CHIP RES. 0-OHM TAPED | S | AA | AA |
| | | | **MISCELLANEOUS PARTS** | | | |
| | | LHLDP1066PE00 | LED HOLDER | S | AA | AB |
| | | QCNW-5972CEZZ | WIRE | S | AB | AF |
| | | LHLDW1033CE00 | HOLDER | S | AA | AA |
| ⚠ | F 0701 | QFS-C3229CEZZ | FUSE S506-3.15A-A1 TOKYO COMPONENTS | S | AA | AC |
| ⚠ | F 0751 | QFS-J2521CEZZ | FUSE 2,5A 125V LITTELFUSE (KURODA9 | S | AC | AD |
| | FB 0301 | RBLN-0037CEZZ | BALUN FBA04HA90088-00 T/Y | S | AB | AB |
| | FB 0451 | RBLN-0037CEZZ | BALUN FBA04HA90088-00 T/Y | S | AB | AB |
| | FB 0452 | RBLN-0037CEZZ | BALUN FBA04HA90088-00 T/Y | S | AB | AB |
| | FB 0601 | RBLN-0037CEZZ | BALUN FBA04HA90088-00 T/Y | S | AB | AB |
| | FB 0701 | RBLN-0037CEZZ | BALUN FBA04HA90088-00 T/Y | S | AB | AB |
| | FH 0701 | QFSHD1001BMZZ | FUSE HOLD.EYF52BC=PANASON | S | AA | AA |
| | FH 0702 | QFSHD1002BMZZ | FUSE HOLD.EYF52BC=PANASON | S | AA | AA |
| | P 0302 | QPLGN0441CEZZ | PLUG 4PIN | S | AA | AA |
| | P 0601 | QPLGN0441CEZZ | PLUG 4PIN | S | AA | AA |
| | P 0602 | QPLGN0560CEZZ | CONNECTOR 5 PIN TV-50P-05-V2 A TAIKO | S | AA | AB |
| | P 0701 | QPLGN0360CEZZ | CONNECTOR 3 PIN TV-50P-03-V2 A TAIKO | S | AA | AA |
| | P 0702 | QPLGN0260CEZZ | CONNECTOR 2 PIN TV-50P-02-V2 A TAIKO | S | AA | AA |
| | P 0801 | QPLGN0541CEZZ | PLUG | S | AA | AA |
| | P 1001 | QPLGN0641CEZZ | PLUG | S | AA | AA |
| | RMC1001 | RRMCU0255CEZZ | R/C RECEIVER TSOP1838UH1 ELEKTRA VISHAY | S | AB | AG |
| ⚠ | S 0701 | QSW-P0591CEZZ | SWITCH SDDFC3-A ALPS | S | AD | AL |
| | S 1001 | QSW-K0003AJZZ | SWITCH | S | AA | AA |
| | S 1002 | QSW-K0003AJZZ | SWITCH | S | AA | AA |
| | S 1003 | QSW-K0003AJZZ | SWITCH | S | AA | AA |
| | S 1004 | QSW-K0003AJZZ | SWITCH | S | AA | AA |
| | S 1005 | QSW-K0003AJZZ | SWITCH | S | AA | AA |
| | SC 0451 | QSOCZ2107BMZZ | SOCKET | S | AF | AE |
| | VA 0701 | RH-VX0047CEZZ | VARISTOR SIOV-S14K420M4 MATSUSHITA | S | AA | AC |
| | **PWB-B** | | **CRT UNIT** | | | |
| | | | **TRANSISTORS** | | | |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | Q 0870 | VSBF422////-1 | TRT BF422 PHILIPS | S | AA | AA |
| | Q 0871 | VSBF422////-1 | TRT BF422 PHILIPS | S | AA | AA |
| | Q 0872 | VSBF422////-1 | TRT BF422 PHILIPS | S | AA | AA |
| | Q 0883 | VSBF421////-1 | TRT BF421 PHILIPS | S | AA | AA |
| | Q 0885 | VSBF421////-1 | TRT BF421 PHILIPS | S | AA | AA |
| | Q 0887 | VSBF421////-1 | TRT BF421 PHILIPS | S | AA | AA |
| | | | **DIODES** | | | |
| | D 0811 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0812 | RH-DX0045BMZZ | DIODE 1N4148 | S | AA | AA |
| | D 0880 | VHD1SS82///1A | DIODE 1SS82-A HITACHI | S | AA | AB |
| | D 0881 | VHD1SS82///1A | DIODE 1SS82-A HITACHI | S | AA | AB |
| | D 0882 | VHD1SS82///1A | DIODE 1SS82-A HITACHI | S | AA | AB |
| | | | **CAPACITORS** | | | |
| | C 0871 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | C 0872 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | C 0873 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | C 0875 | VCKYPA2HB102K | CERAM C 1NF 10% 500V | S | AA | AA |
| | C 0876 | RC-KZ0150CEZZ | CERAM C DE0707-726E102Z3K-A MURATA | S | AA | AB |
| | C 0878 | VCEAGA2EW336M | ELEC C 33UF 20% 250V | S | AA | AD |
| | C 0880 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | C 0881 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | C 0882 | VCKYPA1HB471K | CERAM C 470PF 10% 50V | S | AA | AA |
| | | | **RESISTORS** | | | |
| | R 0879 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | R 0880 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | R 0881 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | R 0882 | VRS-VV3DB153J | MET OX RES 15KOHM 5% 2W | S | AA | AA |
| | R 0883 | VRD-RA2HD272J | RES 2,7KOHM 5% 1/2W | S | AA | AA |
| | R 0884 | VRS-VV3DB153J | MET OX RES 15KOHM 5% 2W | S | AA | AA |
| | R 0885 | VRD-RA2HD272J | RES 2,7KOHM 5% 1/2W | S | AA | AA |
| | R 0886 | VRS-VV3DB153J | MET OX RES 15KOHM 5% 2W | S | AA | AA |
| | R 0887 | VRD-RA2HD272J | RES 2,7KOHM 5% 1/2W | S | AA | AA |
| | R 0892 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0893 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0894 | VRD-RA2BE102J | RES 1KOHM 5% 1/8W | S | AA | AA |
| | R 0895 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | R 0896 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | R 0899 | VRD-RA2BE471J | RES 470 OHM 5% 1/8W | S | AA | AA |
| | | | **MISCELLANEOUS PARTS** | | | |
| | P 0851 | QPLGN0441CEZZ | PLUG 4PIN | S | AA | AA |
| | P 0882 | QPLGN0541CEZZ | PLUG | S | AA | AA |
| | P 0883 | QTIPM0017CEFM | TIP | S | AA | AA |
| ⚠ | SC 0882 | QSOCV0016PEZZ | CRT SOCKET 1SHM07S-L_A_ | S | AA | AE |
| | | LHLDC3009CEFN | ADG COIL HOLDER | S | AA | AB |
| | | LHLDC3500BMFW | HOLDER | S | AA | AB |
| | | LHLDW1514BM00 | HOLDER UNEX 2233 | S | AA | AA |
| | | QEARC0009BMZZ | C.EARTH ELECTROMONTAJES | S | AB | AF |
| | | | **MISCELLANEOUS PARTS** | | | |
| | | LHLDK1501BM00 | HOLDER | S | AA | AB |
| | | LHLDW1009CEZZ | HOLDER | S | AA | AA |
| | | LHLDW1019CEZZ | HOLDER | S | AA | AB |
| | | LHLDW1033CE00 | HOLDER | S | AA | AA |
| | | LHLDW1060CEZZ | HOLDER | S | AA | AA |
| | | LHLDZ1050CEZZ | HOLDER | S | AA | AB |
| | | LHLDZ1714BMZZ | HOLDER ANODE CAP | S | AA | AA |
| ⚠ | | QACCZ2049BMSA | AC CORD | S | AE | AK |
| | | QCNW-5969CEZZ | WIRE (H) | S | AA | AC |
| | | QCNW-5970CEZZ | WIRE (K) | S | AA | AD |
| | | QCNW-6072CEZZ | WIRE (S) | S | AB | AF |
| | | QSOCN0302CEZZ | SOCKET SMK W-A5303-1N | S | AA | AB |
| | | QSOCN0460BMZZ | SOCKET NLA | S | AA | AC |
| | | QSOCN0502CEZZ | SOCKET | S | AA | AB |
| | | QTIPM0025TAZZ | PIN SMK W-T0512-11 | S | AA | AA |
| | | RRMCGA006WJSA | REMOT CONTROL UNIT | S | AK | AW |
| | | SPAKC5494BMZZ | PACKING CASE | S | AL | AX |
| | | SPAKR500A2004 | WRAPPER MATERIAL | S | AE | AN |
| | | SPAKX4076BMZZ | CUSHION | S | AH | AU |
| | | TINS-7248BMN0 | OWNERS MANUAL | S | AG | AT |
| | | UBATU0013TAZZ | BATTERY R6(X2) | S | AA | AD |
| | SP 0301 | VSP9050PB33WA | SPEAKER 509SF32C001MA MISAWA | S | AC | AK |

| | REF No. | PARTS | DESCRIPTION | * | SN CODE | EX CODE |
|---|---|---|---|---|---|---|
| | SP 0302 | VSP9050PB33WA | SPEAKER 509SF32C001MA MISAWA | S | AC | AK |
| | | XTASD30P12000 | SCREW | S | AA | AA |
| | | | **CABINET PARTS** | | | |
| | 1 | CCABA1366BMV0 | FRONT CABINET ASSEMBLY | S | AU | BE |
| | 1.1 | HBDGB3508BMSB | SHARP BADGE | S | AC | AG |
| | 1.2 | HDECQ0069BMSA | DECORATION, POWER INDICATOR | S | AA | AC |
| | 1.3 | JBTN-1082BMSB | BUTTON | S | AA | AD |
| | 1.4 | JBTN-1081BMSA | POWER BUTTON | S | AA | AC |
| ⚠ | 2 | GCABB1129BMKB | REAR CABINET | S | AP | AZ |
| | 3 | XTASB40P20000 | REAR CABINET SCREWS | S | AA | AA |




Note: These sentences refer to P/L (Pag. 41) “Cabinet Parts”

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